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Susan Hanley

Access DB# 73320

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SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Christine Hanley Examiner #: 79026 Date: August 9 2002
 Unit: 1637 Phone Number 308-3617 Serial Number: 09/829
 Mail Box and Bldg/Room Location: 10B01 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Hiroshi Fluorescent nucleotides
 Inventors (please provide full names): Shinoki et al see attached kids

Point of Contact
 Susan Hanley
 Technical Info. Specialist
 CM1 6805 Tel: 305-4053

Earliest Priority Filing Date: 4/09/2000

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

No general formula Structure Claim 5 & 6
 (structures) are the same.
 Claims 7-8 are more specific, I expect some
 of the markush groups to surface in old literature.
 but look for one attached to a nucleic acid or
 some (bio) structure
 See Specification for examples 1-8 & notes 21
 and some notes.

I believe this will turn up some of the same results
 as other Fuji stuff. Thank-you Christine

STAFF USE ONLY

Searcher: Hanley
 Searcher Phone #: _____
 Searcher Location: _____
 Date Searcher Picked Up: 8/15
 Date Completed: 8/28
 Searcher Prep & Review Time: _____
 Clerical Prep Time: _____
 Online Time: _____

Type of Search

NA Sequence (#) _____
 AA Sequence (#) _____
 Structure (#) _____
 Bibliographic _____
 Litigation _____
 Fulltext _____
 Patent Family _____
 Other _____

Vendors and cost where applicable

STN _____
 Dialog _____
 Questel/Orbit _____
 Dr. Link _____
 Lexis/Nexis _____
 Sequence Systems _____
 WWW/Internet _____
 Other (specify) _____

BEST AVAILABLE COPY

FILE 'HOME' ENTERED AT 11:57:11 ON 28 AUG 2002)

FILE 'REGISTRY' ENTERED AT 11:57:19 ON 28 AUG 2002

FILE 'HCAPLUS' ENTERED AT 11:57:20 ON 28 AUG 2002

L1 78 S SHINOKI H?/AU
 L2 360 S INOMATA H?/AU
 L3 2835 S KOJIMA M?/AU
 L4 514 S SUDO Y?/AU
 L5 112 S SESHIMOTO O?/AU
 L6 3873 S L1-5
 L7 70 S L6 AND FLUORESCEN?
 L8 6 S L7 AND NUCLEOTID?
 L9 89880 S ?CYANIN? OR ?STYRYL?
 L10 1 S L8 AND L9
 SELECT RN L10 1

*inventor
search*

FILE 'REGISTRY' ENTERED AT 11:59:38 ON 28 AUG 2002

L11 53 S E1-53

FILE 'HCAPLUS' ENTERED AT 12:00:05 ON 28 AUG 2002

L12 1 S L10 AND L11
 E CYANINE/CT
 E CYANINE DYES+ALL/CT
 L13 5725 S E7-8
 E MEROCYANINE DYES/CT
 L14 3564 S ?MERO CYANIN?
 E STYRYL?CT
 E STYRYL?/CT
 L15 16673 S ?STYRYL?
 L16 863910 S (DNA OR ?NUCLEOTID? OR NUCLEIC)
 L17 373 S L16 AND L13-15
 E SULFON/CT
 E SULFONATES+ALL/CT
 L18 18654 S E2,E46-47
 E PHOSPHOR/CT
 E PHOSPHATES, BIOLOGICAL STUDIES+ALL/CT
 L19 6154 S E3
 L20 3 S L17 AND L18
 L21 1 S L17 AND L19
 L22 3 S L20-21
 L23 2 S L22 NOT L12
 SELECT RN L23 1-2

1 cites w/ 53 cpds displayed

index searching

FILE 'REGISTRY' ENTERED AT 12:10:03 ON 28 AUG 2002

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 L25 103 S L24 AND RSD/FA AND N/ELS
 L26 4 S L25 AND 46.150.18/RID
 L27 2249 S NCSC2-C6-C6/ES AND 1 46.150.18/RID
 L28 1165 S NCOC2-C6-C6/ES AND 1 46.150.18/RID

FILE 'HCAPLUS' ENTERED AT 12:16:33 ON 28 AUG 2002

L29 2 S L23 AND L25
2 cites

FILE 'REGISTRY' ENTERED AT 12:19:51 ON 28 AUG 2002

L30 STR
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 L32 STR L30

L33 50 S L32
 SAVE L*** MAU467P/A TEMP
 L34 STR L32
 L35 50 S L34
 L36 45490 S L34 FUL ← 45490 op ds
 DEL MAU467P/A
 SAVE TEMP L36 MAU467P/A
 L37 904 S L36 AND NCNC3/ES
 L38 19839 S L36 AND 46.150.18/RID
 L39 4949 S L36 AND ?SULFON?/CNS
 L40 639 S L36 AND ?PHOSPH?/CNS
 L41 39918 S L36 NOT L39-40
 L42 561 S L41 AND OC4/ES

FILE 'HCAPLUS' ENTERED AT 12:48:55 ON 28 AUG 2002

L43 2359 S L39
 L44 261 S L40
 L45 219 S L42
 L46 8330 S L16(3A)FLUORES?
 L47 33 S L46 AND L43-44
 L48 9 S L47 AND ?CONJUGAT?
 L49 24 S L47 NOT L48
 L50 68099 S L15 OR ?CYANINE?
 L51 16 S L49 AND L50
 L52 0 S L18-19 AND L51
 L53 7 S (?SULFON? OR ?PHOSPH?) AND L51
 L54 0 S L45 AND L46
 L55 52 S L45 AND (L18-19 OR ?SULFON? OR ?PHOSPH?)
 L56 1 S L55 AND L16
 L57 24 S L55 AND L50
 L58 2 S L16 AND L45
 L59 2 S L58 OR L56
 L60 17 S (L48 OR L53 OR L59) NOT L12 17 cites

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L61 39357 S L41 NOT L42

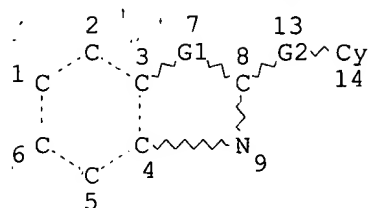
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 L63 266 S L46 AND L62
 L64 74 S L63 AND ?CONJUGAT?
 L65 21 S L64 AND L50
 L66 26 S L64 AND (L18-19 OR ?SULFON? OR ?PHOSPH?)
 L67 8 S L65 AND L66
 L68 18 S L66 NOT L67 18 cites
 L69 7 S L67 NOT L12 7 cites

=> d que 136

L34

STR



Me~C~Me
10 @11 12

STR for all STR searching

VAR G1=O/S/11

REP G2=(2-9) C

NODE ATTRIBUTES:

CONNECT IS E3 RC AT 8

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L36 45490 SEA FILE=REGISTRY SSS FUL L34

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L29 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:437966 HCAPLUS

DOCUMENT NUMBER: 125:81266

TITLE: Dye-biomolecule conjugates as contrast agents for in-vivo near-IR diagnostic methods

INVENTOR(S): Licha, Kai; Riefke, Bjoern; Semmler, Wolfhard; Speck, Ulrich; Hilger, Christoph-Stephan

PATENT ASSIGNEE(S): Institut fuer Diagnostikforschung Gmbh an der Freien Universitaet Berlin, Germany

SOURCE: Ger. Offen., 18 pp.

CODEN: GWXXBX

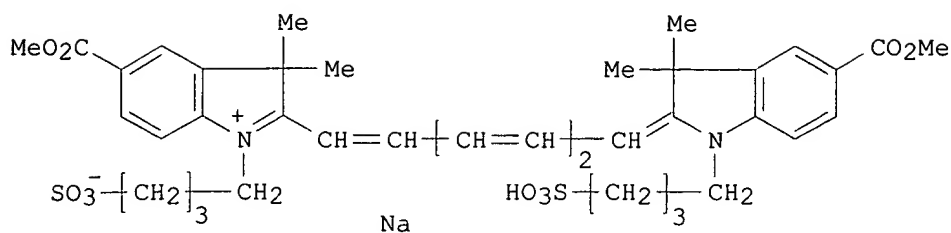
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4445065	A1	19960613	DE 1994-4445065	19941207
CA 2205906	AA	19960613	CA 1995-2205906	19951010
WO 9617628	A1	19960613	WO 1995-DE1465	19951010
W: AU, CA, CN, HU, JP, KR, NO, NZ, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9537409	A1	19960626	AU 1995-37409	19951010
AU 709152	B2	19990819		
EP 796111	A1	19970924	EP 1995-935348	19951010
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CN 1174511	A	19980225	CN 1995-196624	19951010
HU 77378	A2	19980428	HU 1997-1797	19951010
JP 10510250	T2	19981006	JP 1995-517228	19951010
JP 2002012782	A2	20020115	JP 2001-143906	19951010
EP 1181940	A2	20020227	EP 2001-250366	19951010
EP 1181940	A3	20020313		
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ZA 9509707	A	19960529	ZA 1995-9707	19951115
NO 9702509	A	19970602	NO 1997-2509	19970602
US 6083485	A	20000704	US 1997-849369	19971107
US 2001055567	A1	20011227	US 2001-850660	20010507
PRIORITY APPLN. INFO.:				
			DE 1994-4445065	A 19941207
			EP 1995-935348	A3 19951010
			JP 1995-517228	A2 19951010
			WO 1995-DE1465	W 19951010
			US 1997-849369	A1 19971107
			US 2000-518947	A3 20000306
OTHER SOURCE(S): MARPAT 125:81266				
GI				



I

AB Conjugates B.scriptl.(FWn)m [B = biol. recognition mol. (mol. wt. .ltoreq.30,000); F = dye; W = hydrophilic group to improve water soly.; .scriptl. = 0-6; n = 0-10; m = 1-100] are useful as contrast agents in fluorescent and transillumination diagnostic procedures in vivo. Recognition mol. B may bind specifically to selected cell populations or receptors, may be a nonspecifically binding macromol., or may become enriched in tissues, tumors, or blood. Thus, cyanine dye I was administered i.v. to mice bearing tumor LS174T. I became enriched in the tumor after 18 h, as shown by IR fluorescence during irradiation at 740 nm.

IT 22195-47-7 51143-35-2, Glutaconaldehyde dianil

hydrochloride 80566-25-2 178698-85-6

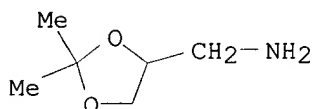
178822-76-9 178822-77-0 178822-78-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)

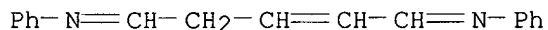
RN 22195-47-7 HCAPLUS

CN 1,3-Dioxolane-4-methanamine, 2,2-dimethyl- (9CI) (CA INDEX NAME)



RN 51143-35-2 HCAPLUS

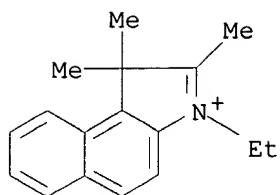
CN Benzenamine, N,N'-2-pentene-1,5-diylidenebis-, hydrochloride (9CI) (CA
INDEX NAME)



●_x HCl

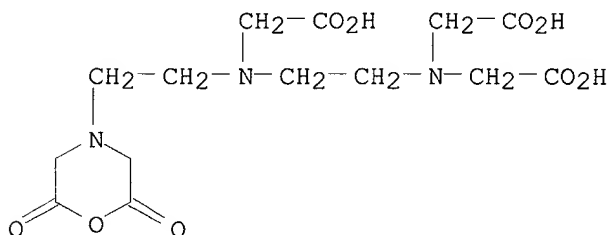
RN 80566-25-2 HCAPLUS

CN 1H-Benz[e]indolium, 3-ethyl-1,1,2-trimethyl-, iodide (9CI) (CA INDEX NAME)



● I⁻

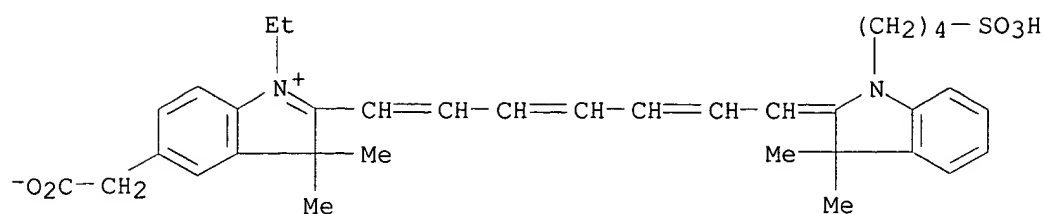
RN 178698-85-6 HCAPLUS
 CN Glycine, N-[2-[bis(carboxymethyl)amino]ethyl]-N-[2-(2,6-dioxo-4-morpholinyl)ethyl]-, monoethyl ester (9CI) (CA INDEX NAME)
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 CRN 106145-40-8
 CMF C14 H21 N3 O9



CM 2
 CRN 64-17-5
 CMF C2 H6 O

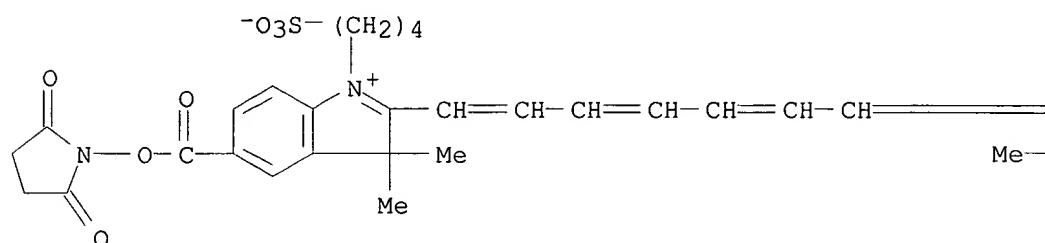
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RN 178822-76-9 HCAPLUS
 CN 3H-Indolium, 5-(carboxymethyl)-2-[7-[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-1-ethyl-3,3-dimethyl-, inner salt (9CI) (CA INDEX NAME)



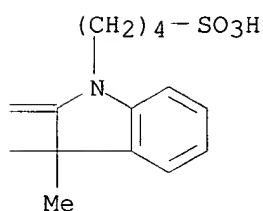
RN 178822-77-0 HCAPLUS
 CN 3H-Indolium, 2-[7-[1,3-dihydro-3,3-dimethyl-1-(4-sulfoethyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-5-[[2,5-dioxo-1-pyrrolidinyl]oxy]carbonyl]-3,3-dimethyl-1-(4-sulfoethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

PAGE 1-A

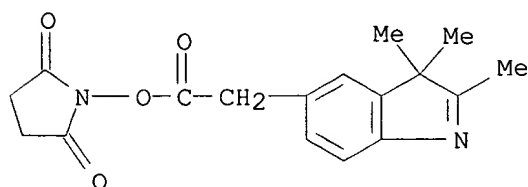


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PAGE 1-B

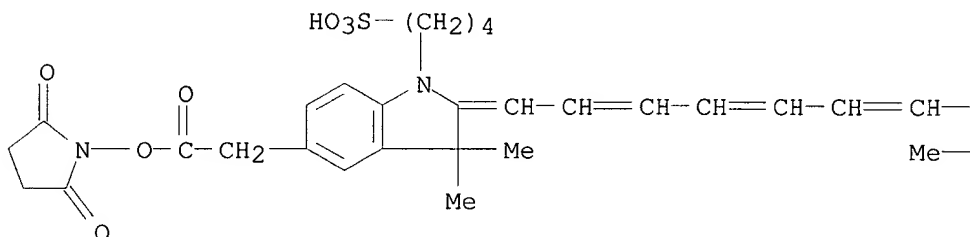


RN 178822-78-1 HCAPLUS
 CN 2,5-Pyrrolidinedione, 1-[[2,3,3-trimethyl-3H-indol-5-yl]acetyl]oxy]- (9CI) (CA INDEX NAME)

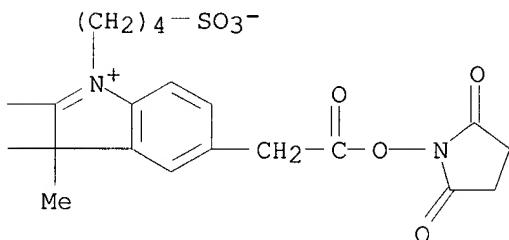


IT 178822-68-9P 178822-69-0P 178822-70-3P
178822-71-4P 178822-72-5P 178822-73-6P
178822-74-7P 178822-75-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(dye-biomol. conjugates as contrast agents for in-vivo near-IR
diagnostic methods)
RN 178822-68-9 HCAPLUS
CN 3H-Indolium, 5-[2-[(2,5-dioxo-1-pyrrolidinyl)oxy]-2-oxoethyl]-2-[7-[5-[2-
[(2,5-dioxo-1-pyrrolidinyl)oxy]-2-oxoethyl]-1,3-dihydro-3,3-dimethyl-1-(4-
sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-3,3-dimethyl-1-(4-
sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A

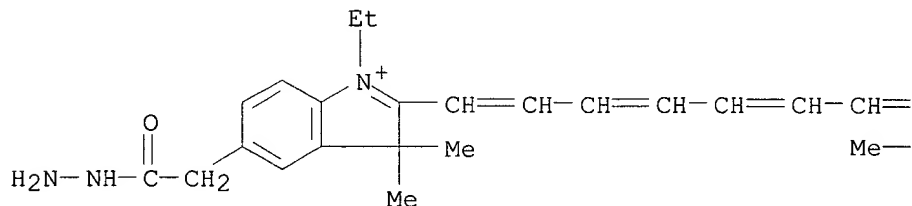


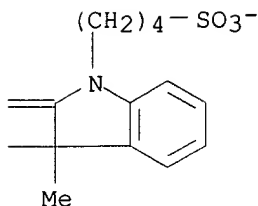
PAGE 1-B



RN 178822-69-0 HCAPLUS
CN 3H-Indolium, 2-[7-[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-
ylidene]-1,3,5-heptatrienyl]-1-ethyl-3,3-dimethyl-5-(2-hydrazino-2-
oxoethyl)-, inner salt (9CI) (CA INDEX NAME)

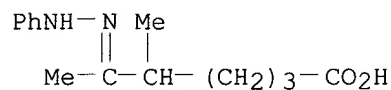
PAGE 1-A





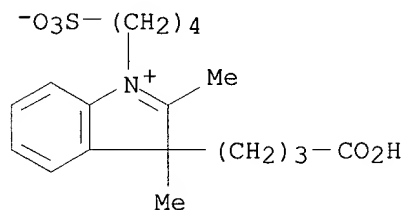
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CN Heptanoic acid, 5-methyl-6-(phenylhydrazono)- (9CI) (CA INDEX NAME)



RN 178822-71-4 HCAPLUS

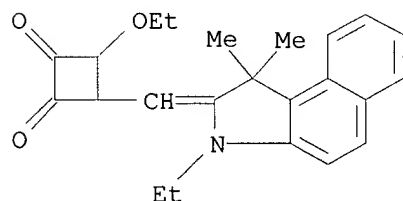
CN 3H-Indolium, 3-(3-carboxypropyl)-2,3-dimethyl-1-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

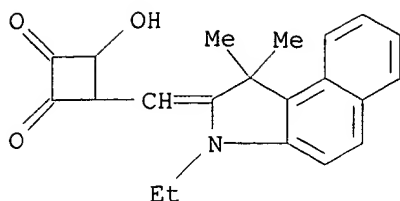
RN 178822-72-5 HCAPLUS

CN 1,2-Cyclobutanedione, 3-ethoxy-4-[(3-ethyl-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene)methyl]- (9CI) (CA INDEX NAME)

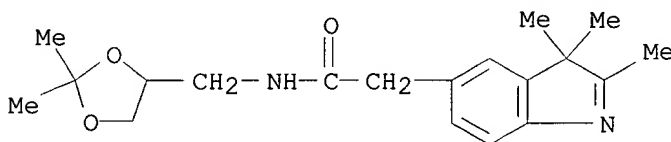


RN 178822-73-6 HCAPLUS

CN 1,2-Cyclobutanedione, 3-[(3-ethyl-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene)methyl]-4-hydroxy- (9CI) (CA INDEX NAME)

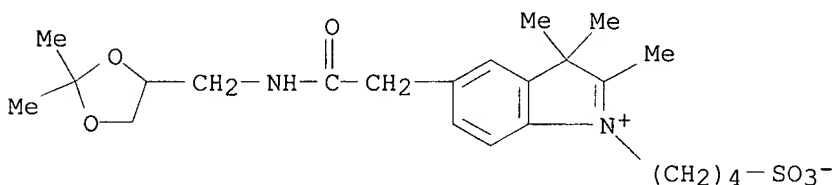


RN 178822-74-7 HCAPLUS
CN 3H-Indole-5-acetamide, N-[(2,2-dimethyl-1,3-dioxolan-4-yl)methyl]-2,3,3-trimethyl-, potassium salt (9CI) (CA INDEX NAME)



● K

RN 178822-75-8 HCAPLUS
CN 3H-Indolium, 5-[2-[(2,2-dimethyl-1,3-dioxolan-4-yl)methyl]amino]-2-oxoethyl]-2,3,3-trimethyl-1-(4-sulfobutyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)

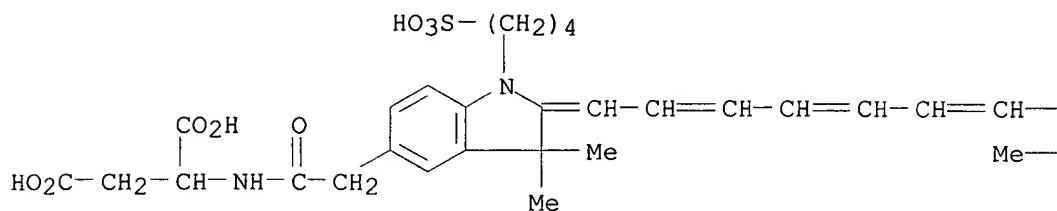


● K

IT 178822-60-1DP, conjugates with biomols. 178822-61-2DP, conjugates with biomols. 178822-62-3DP, conjugates with biomols. 178822-63-4DP, conjugates with biomols. 178822-64-5DP, conjugates with biomols. 178822-65-6DP, conjugates with biomols. 178822-66-7DP, conjugates with biomols. 178822-67-8DP, conjugates with biomols.
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
RN 178822-60-1 HCAPLUS
CN 3H-Indolium, 5-[2-[(1,2-dicarboxyethyl)amino]-2-oxoethyl]-2-[7-[5-[2-[(1,2-dicarboxyethyl)amino]-2-oxoethyl]-1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-3,3-dimethyl-1-(4-

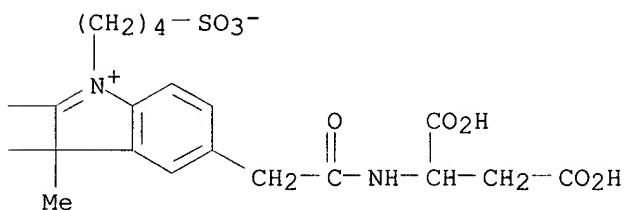
sulfobutyl)-, inner salt, monopotassium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● K

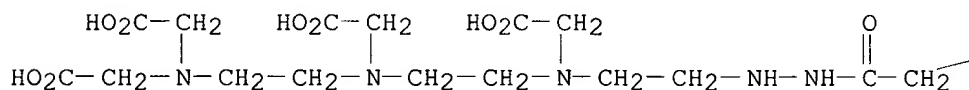
PAGE 1-B



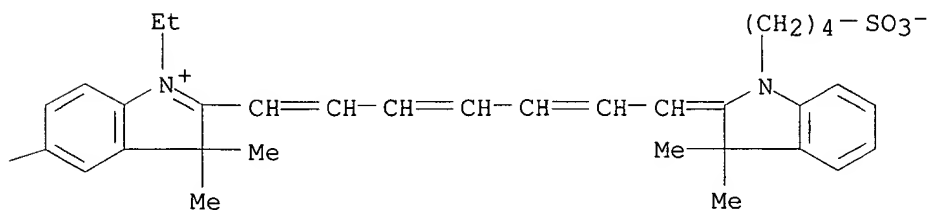
RN 178822-61-2 HCAPLUS

CN 3H-Indolium, 5-[14-carboxy-7,10,13-tris(carboxymethyl)-2-oxo-3,4,7,10,13-pentaazatetradec-1-yl]-2-[7-[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-1-ethyl-3,3-dimethyl-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A



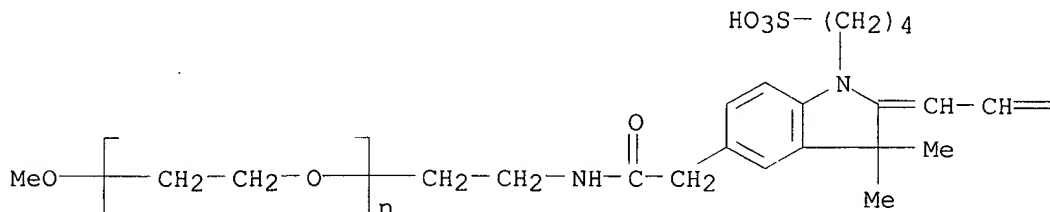
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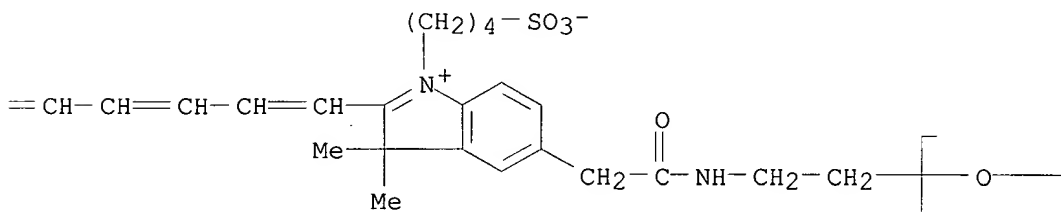
CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-methoxy-, ether with
2-[7-[1,3-dihydro-5-[2-[(2-hydroxyethyl)amino]-2-oxoethoxy]-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-5-[2-[(2-hydroxyethyl)amino]-2-oxoethoxy]-3,3-dimethyl-1-(4-sulfobutyl)-3H-indolium
inner salt (2:1), monosodium salt (9CI) (CA INDEX NAME)

PAGE 1-A

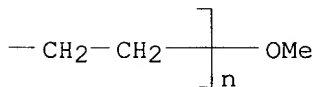


● Na

PAGE 1-B



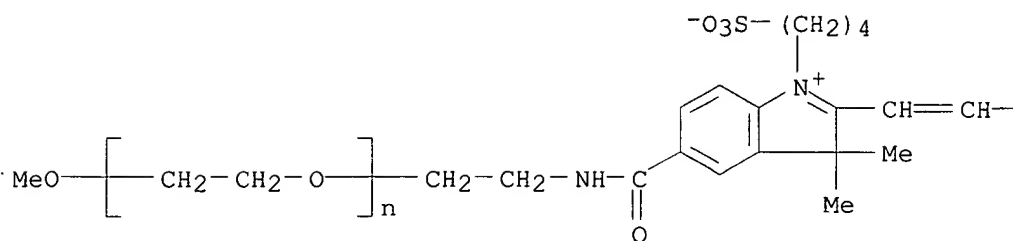
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RN 178822-63-4 HCAPLUS

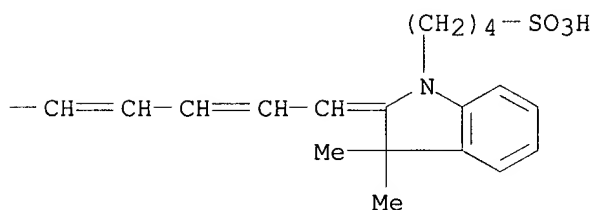
CN Poly(oxy-1,2-ethanediyl), .alpha.-[2-[[[2-[7-[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-3,3-dimethyl-1-(4-sulfobutyl)-3H-indolium-5-yl]carbonyl]amino]ethyl]-.omega.-methoxy-, inner
salt, monosodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



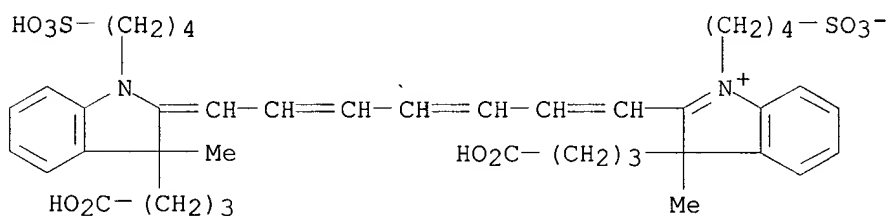
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PAGE 1-B



RN 178822-64-5 HCAPLUS

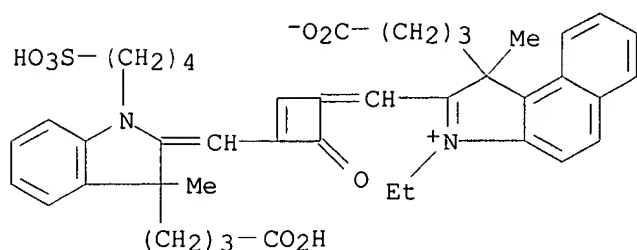
CN 3H-Indolium, 3-(3-carboxypropyl)-2-[7-[3-(3-carboxypropyl)-1,3-dihydro-3-methyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-3-methyl-1-(4-sulfobutyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)



● Na

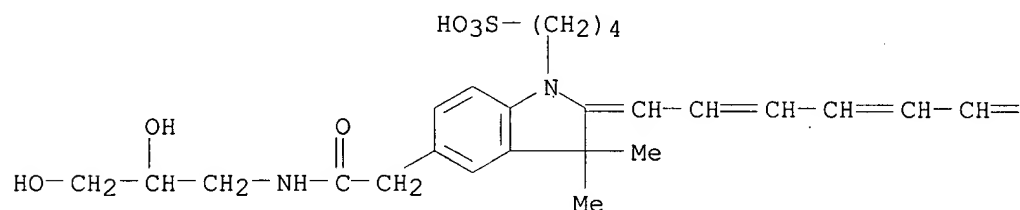
RN 178822-65-6 HCAPLUS

CN 1H-Benz[e]indolium, 1-(3-carboxypropyl)-2-[[3-[[3-(3-carboxypropyl)-1,3-dihydro-3-methyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]methyl]-4-oxo-2-cyclobuten-1-ylidene]methyl]-3-ethyl-1-methyl-, inner salt (9CI) (CA INDEX NAME)



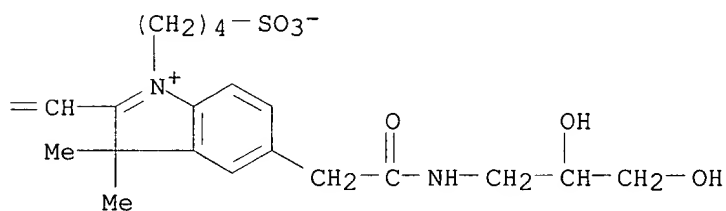
RN 178822-66-7 HCAPLUS
 CN 3H-Indolium, 5-[2-[(2,3-dihydroxypropyl)amino]-2-oxoethyl]-2-[7-[5-[2-[(2,3-dihydroxypropyl)amino]-2-oxoethyl]-1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



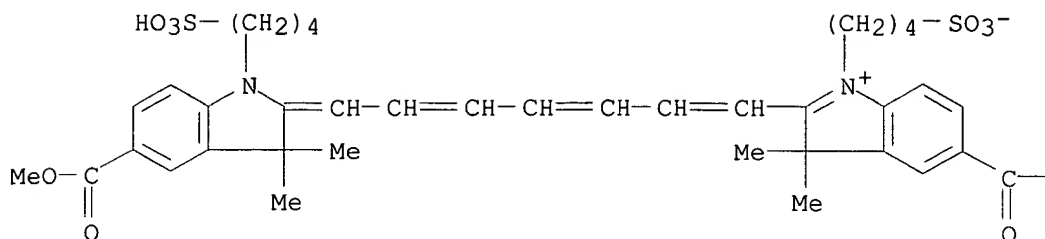
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PAGE 1-B



RN 178822-67-8 HCAPLUS
 CN 3H-Indolium, 2-[7-[1,3-dihydro-5-(methoxycarbonyl)-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-5-(methoxycarbonyl)-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



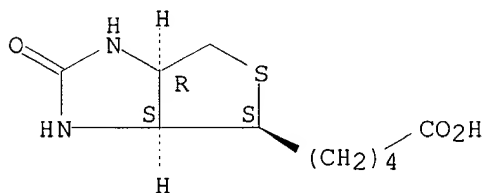
● Na

PAGE 1-B

— OMe

IT 58-85-5D, Biotin, conjugates with dyes
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (dye-biomol. conjugates as contrast agents for in-vivo near-IR
 diagnostic methods)
 RN 58-85-5 HCAPLUS
 CN 1H-Thieno[3,4-d]imidazole-4-pentanoic acid, hexahydro-2-oxo-,
 (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



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L29 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2002 ACS
 IC ICM A61K049-00
 ICS G01N021-64; C09B069-10; C09B023-02; C09B023-14
 CC 9-5 (Biochemical Methods)
 Section cross-reference(s): 28, 41
 ST IR fluorescence dye conjugate diagnosis; cyanine dye IR fluorescence
 diagnosis; biomol dye conjugate fluorescence diagnosis
 IT Chelating agents
 (conjugates with biomols. and dyes; dye-biomol. conjugates as contrast

- agents for in-vivo near-IR diagnostic methods)
- IT Alcohols, biological studies
- Carboxylic acids, biological studies
- Esters, biological studies
- Ethers, biological studies
- Sulfonic acids, biological studies**
- RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
- (conjugates with biomols. and dyes; dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
- IT Dyes
- Dyes, cyanine**
- (conjugates with biomols.; dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
- IT Carotenes and Carotenoids
- Lymphokines and Cytokines
- Neurohormones
- RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
- (conjugates with dyes; dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
- IT Diagnosis
- (dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
- IT Animal tissue
- Blood
- Neoplasm
- (enrichment in; dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
- IT Animal cell
- (specific binding to; dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
- IT Receptors
- RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
- (specific binding to; dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
- IT Enzymes
- RL: BSU (Biological study, unclassified); BIOL (Biological study)
- (substrates for, conjugates with dyes; dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
- IT Spectrochemical analysis
- (IR, dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
- IT Ligands
- RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
- (conjugated, with dyes; dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
- IT Agglutinins and Lectins
- Amino acids, biological studies
- Animal growth regulators
- Antigens
- Carbohydrates and Sugars, biological studies
- Coenzymes
- Haptens
- Hormones
- Macromolecular compounds
- Oligosaccharides
- Peptides, biological studies
- Polysaccharides
- Toxins
- RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

- (conjugates, with dyes; dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
- IT Neurohormones
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(neurotransmitters, conjugates, with dyes; dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
- IT **Nucleotides**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oligo-, conjugates, with dyes; dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
- IT 56-84-8, L-Aspartic acid, reactions 1633-83-6, 1,4-Butanesultone 5231-87-8 22195-47-7 51143-35-2, Glutaconaldehyde dianil hydrochloride 57998-45-5, 5-Methyl-6-oxoheptanoic acid 80506-64-5 80566-25-2 178698-85-6 178822-76-9 178822-77-0 178822-78-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
- IT 178822-68-9P 178822-69-0P 178822-70-3P 178822-71-4P 178822-72-5P 178822-73-6P 178822-74-7P 178822-75-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
- IT 178822-60-1DP, conjugates with biomols. 178822-61-2DP, conjugates with biomols. 178822-62-3DP, conjugates with biomols. 178822-63-4DP, conjugates with biomols. 178822-64-5DP, conjugates with biomols. 178822-65-6DP, conjugates with biomols. 178822-66-7DP, conjugates with biomols. 178822-67-8DP, conjugates with biomols.
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)
- IT 58-85-5D, Biotin, conjugates with dyes 9004-54-0D, Dextran, conjugates with dyes 25322-68-3D, conjugates with biomols. and dyes
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(dye-biomol. conjugates as contrast agents for in-vivo near-IR diagnostic methods)

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L29 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:194739 HCAPLUS

DOCUMENT NUMBER: 124:225822

TITLE: N-heteroaromatic ion and iminium ion substituted
cyanine dyes for use as fluorescence labels

INVENTOR(S): Lee, Linda G.; Woo, Sam L.

PATENT ASSIGNEE(S): Biometric Imaging, Inc., USA

SOURCE: PCT Int. Appl., 55 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9600902	A1	19960111	WO 1995-US8778	19950629
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TT, UA				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5453505	A	19950926	US 1994-268852	19940630
AU 9530085	A1	19960125	AU 1995-30085	19950629
EP 769145	A1	19970423	EP 1995-926272	19950629
R: AT, BE, CH, DE, ES, FR, GB, IE, IT, LI, LU, NL, SE				
PRIORITY APPLN. INFO.:			US 1994-268852	19940630
			US 1995-388607	19950214
			WO 1995-US8778	19950629

OTHER SOURCE(S): MARPAT 124:225822

GI For diagram(s), see printed CA Issue.

AB The present invention relates to iminium ion-substituted cyanine dyes having a fluorescence absorbance of between about 500 and 900 nm, a reduced tendency to aggregate and enhanced photostability. The cyanine dyes of the present invention are represented by formula I where n is 0, 1, 2 or 3; R1 and R2 are taken together to form an arom. ring or a fused polycyclic arom. ring; R3 and R4 are taken together to form an arom. ring or a fused polycyclic arom. ring; R5 and R6 are independently selected from the group consisting of (CH₂)_pX where p is 1-18 and X is a functional group that reacts with amino, hydroxy and sulfhydryl nucleophiles; R7 and R8 are independently selected from the group consisting of H, C1-C10 alkyl groups and where R7 and R8 are taken together to form a 5- or 6-membered heterocyclic ring; R9 are each independently selected from the group consisting of H, alkyl and where >1 R9 are taken together to form a 5- or 6-membered ring; Y is selected from the group consisting of C(CH₃)₂, S, O and Se; and Z is selected from the group consisting of C(CH₃)₂, S, O and Se. The present invention also relates to a method for using the cyanine dyes of the present invention to fluorescent label mols., particularly biomols. such as antibodies, DNA, carbohydrates and cells.

IT 174829-15-3P 174829-16-4P 174829-17-5P
 174829-18-6P 174829-20-0P 174829-21-1P
 174829-23-3P 174829-25-5P 174829-27-7P
 174829-28-8P 174829-29-9P 174829-30-2P
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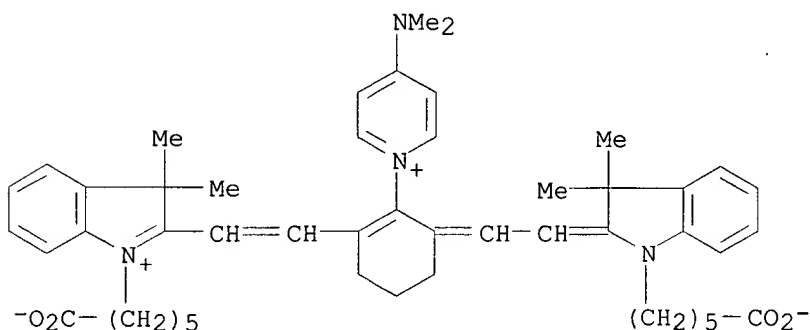
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 174829-52-8P 174829-53-9P 174829-54-0P
 174829-56-2P 174829-57-3P 174829-58-4P
 174829-59-5P 174829-61-9P

RL: ARG (Analytical reagent use); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as fluorescent labels for biopolymers and cells)

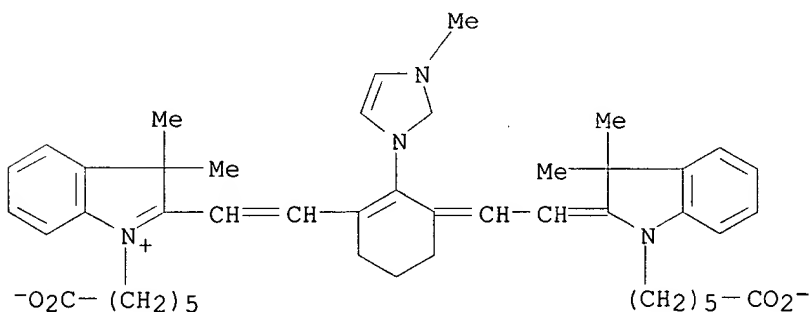
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CN 3H-Indolium, 1-(5-carboxypentyl)-2-[2-[3-[[1-(5-carboxypentyl)-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]ethylidene]-2-[4-(dimethylamino)pyridinio]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-, bis(inner salt) (9CI) (CA INDEX NAME)



RN 174829-16-4 HCAPLUS

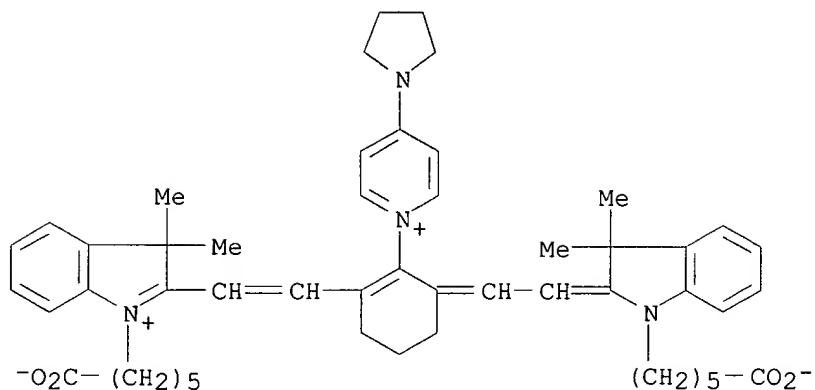
CN 3H-Indolium, 1-(5-carboxypentyl)-2-[2-[3-[[1-(5-carboxypentyl)-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]ethylidene]-2-(3-methyl-1H-imidazolium-1-yl)-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-, bis(inner salt) (9CI) (CA INDEX NAME)



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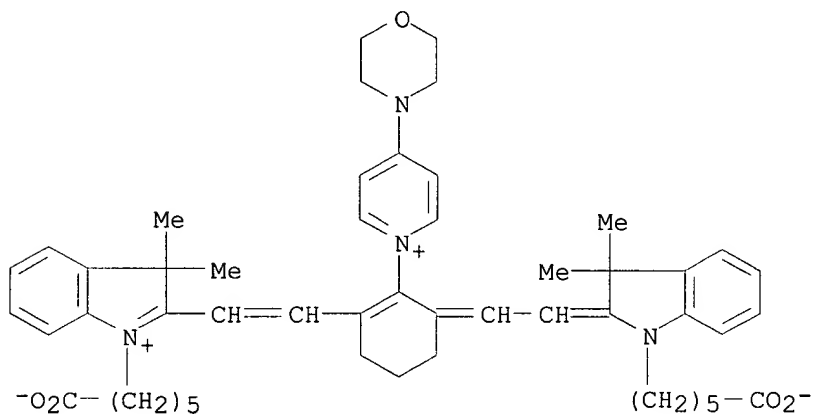
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CN 3H-Indolium, 1-(5-carboxypentyl)-2-[2-[3-[[1-(5-carboxypentyl)-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]ethylidene]-2-[4-(1-pyrrolidiny)pyridinio]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-, bis(inner salt) (9CI) (CA INDEX NAME)



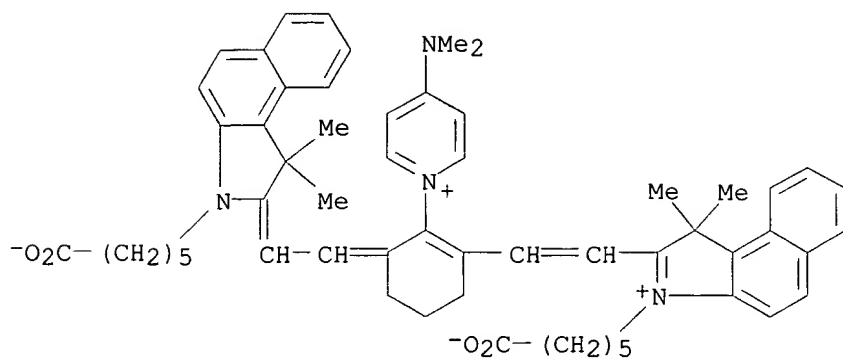
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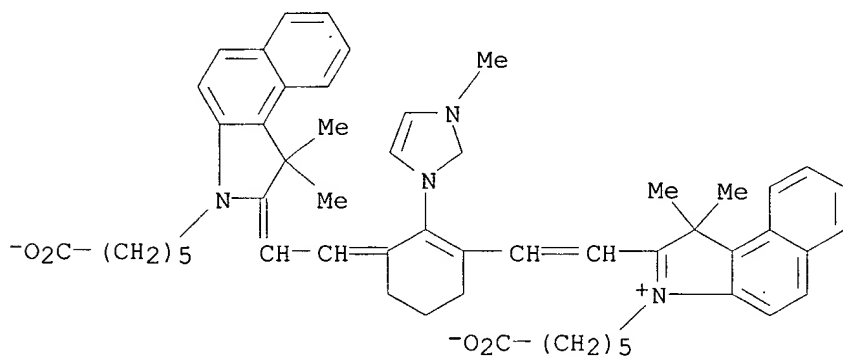
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CN 1H-Benz[e]indolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene]ethylidene]-2-[4-(dimethylamino)pyridinio]-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-, bis(inner salt) (9CI) (CA INDEX NAME)



RN 174829-21-1 HCAPLUS

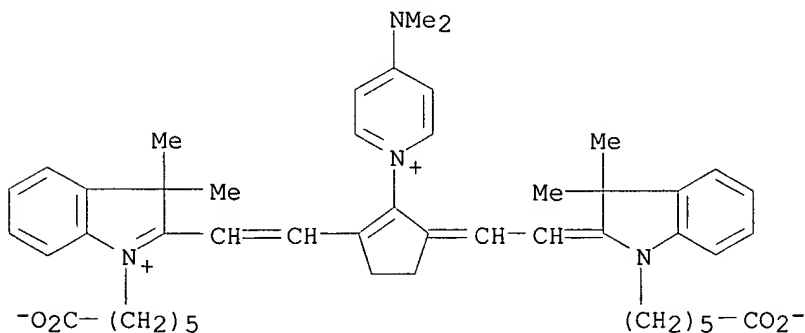
CN 1H-Benz[e]indolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene]ethylidene]-2-(3-methyl-1H-imidazolium-1-yl)-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-, bis(inner salt) (9CI) (CA INDEX NAME)



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

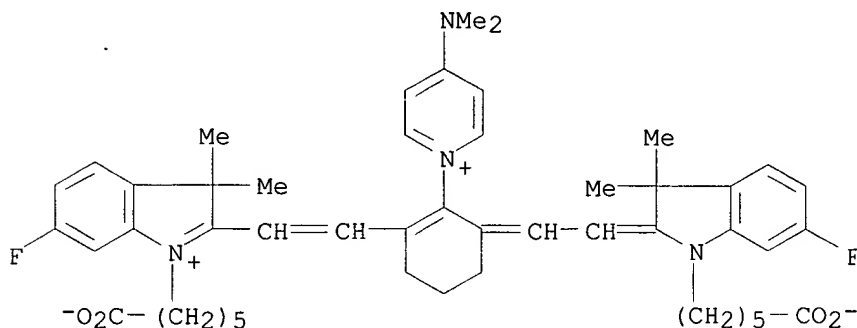
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CN 3H-Indolium, 1-(5-carboxypentyl)-2-[2-[3-[[1-(5-carboxypentyl)-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]ethylidene]-2-[4-(dimethylamino)pyridinio]-1-cyclopenten-1-yl]ethenyl]-3,3-dimethyl-, bis(inner salt) (9CI) (CA INDEX NAME)



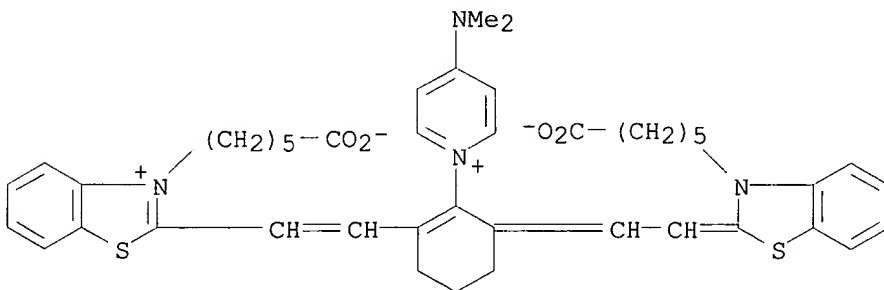
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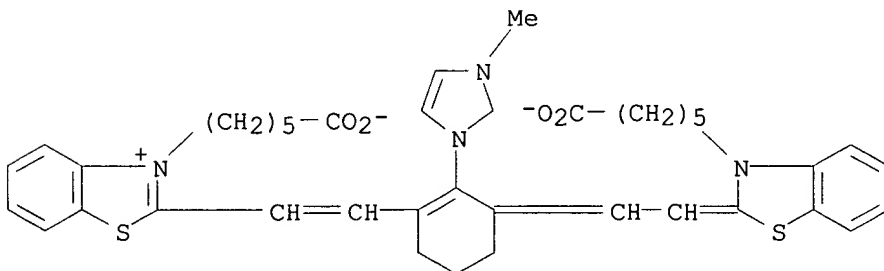
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CN Benzothiazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzothiazolylidene]ethylidene]-2-[4-(dimethylamino)pyridinio]-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



RN 174829-28-8 HCAPLUS

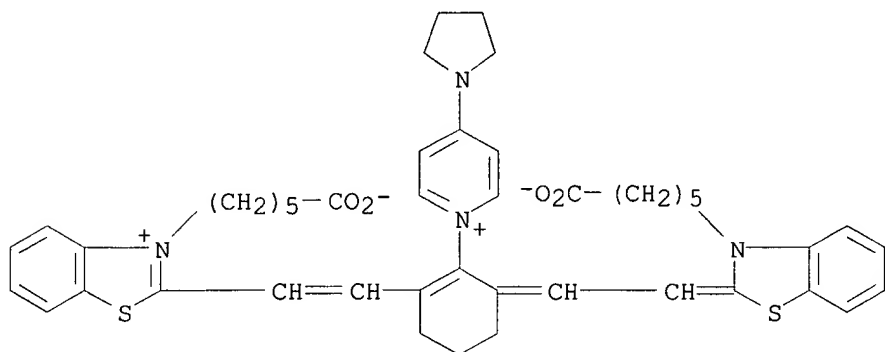
CN Benzothiazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzothiazolylidene]ethylidene]-2-(3-methyl-1H-imidazol-1-yl)-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



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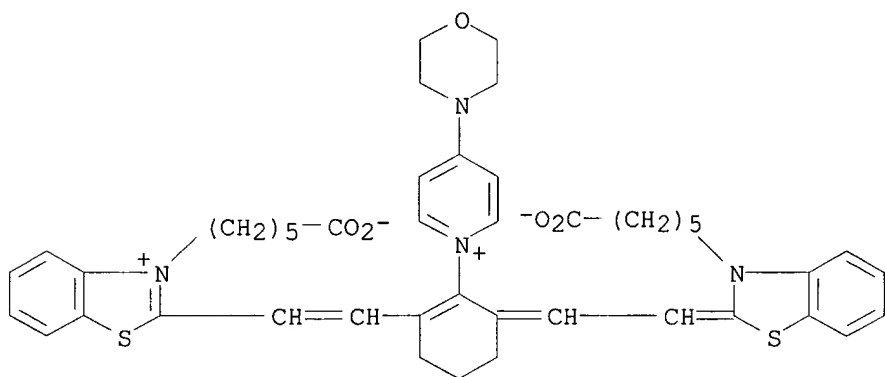
RN 174829-29-9 HCAPLUS

CN Benzothiazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzothiazolylydene]ethylidene]-2-[4-(1-pyrrolidinyl)pyridinio]-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



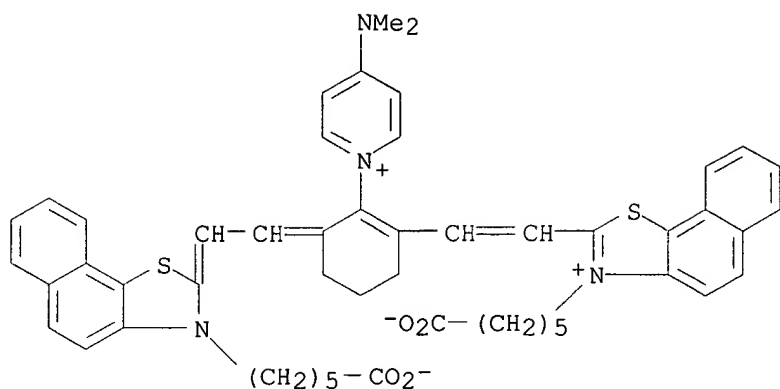
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CN Benzothiazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzothiazolylydene]ethylidene]-2-[4-(4-morpholinyl)pyridinio]-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



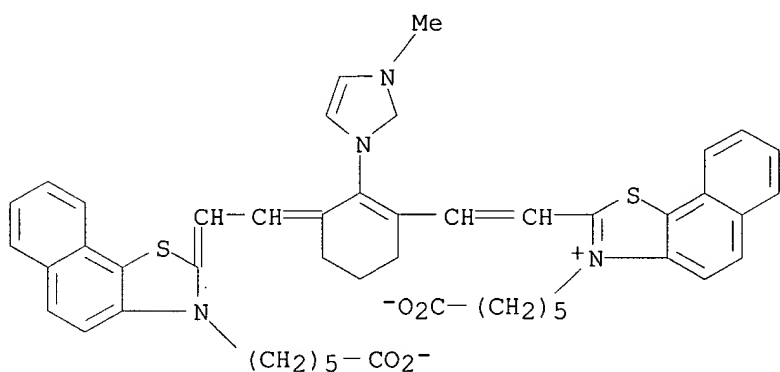
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CN Naphtho[2,1-d]thiazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)naphtho[2,1-d]thiazol-2(3H)-ylidene]ethylidene]-2-[4-(dimethylamino)pyridinio]-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



RN 174829-33-5 HCAPLUS

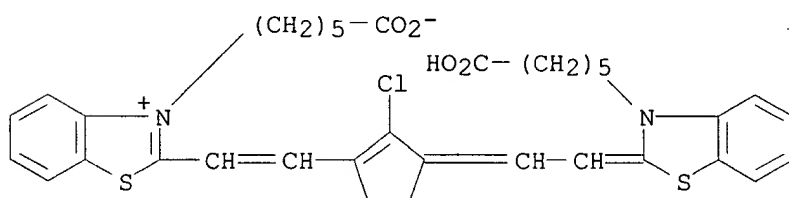
CN Naphtho[2,1-d]thiazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)naphtho[2,1-d]thiazol-2(3H)-ylidene]ethylidene]-2-(3-methyl-1H-imidazol-1-yl)-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



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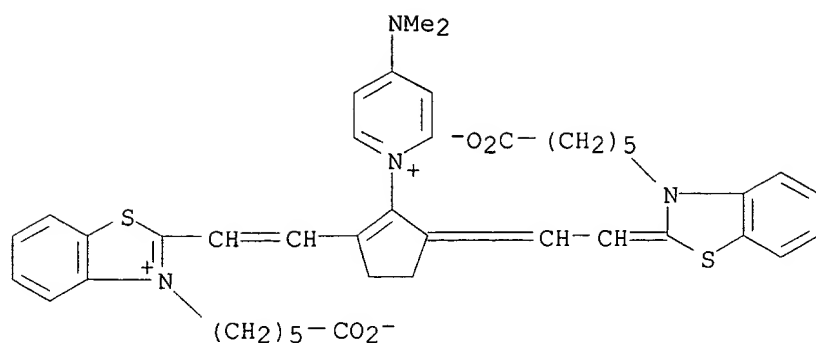
RN 174829-34-6 HCAPLUS

CN Benzothiazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzothiazolyliidene]ethylidene]-2-chloro-1-cyclopenten-1-yl]ethenyl]-, inner salt (9CI) (CA INDEX NAME)



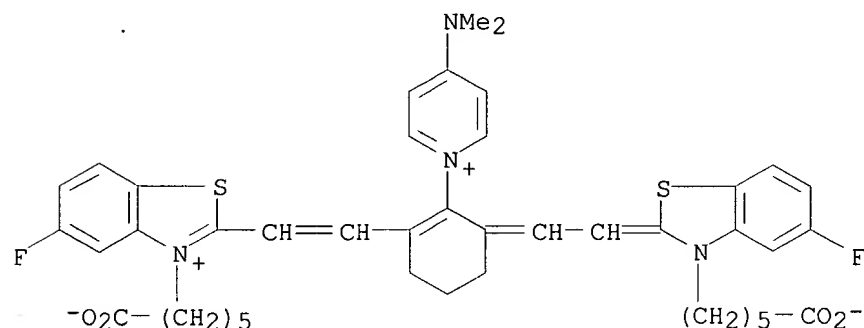
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CN Benzothiazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzothiazolyliidene]ethylidene]-2-(4-(dimethylamino)pyridinio)-1-cyclopenten-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



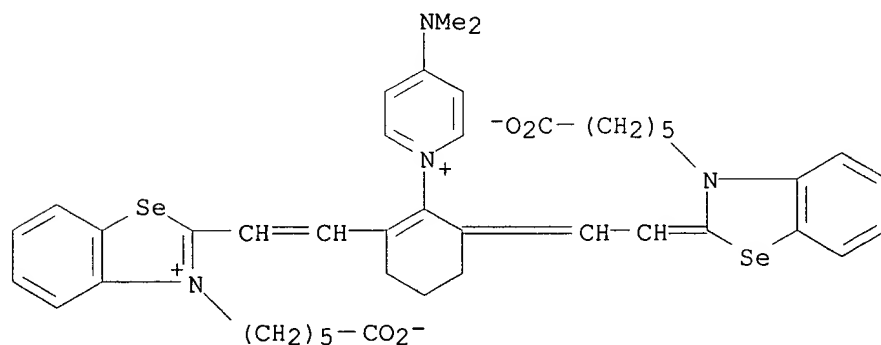
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CN Benzothiazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-5-fluoro-2(3H)-benzothiazolylidene]ethylidene]-2-[4-(dimethylamino)pyridinio]-1-cyclohexen-1-yl]ethenyl]-5-fluoro-, bis(inner salt) (9CI) (CA INDEX NAME)



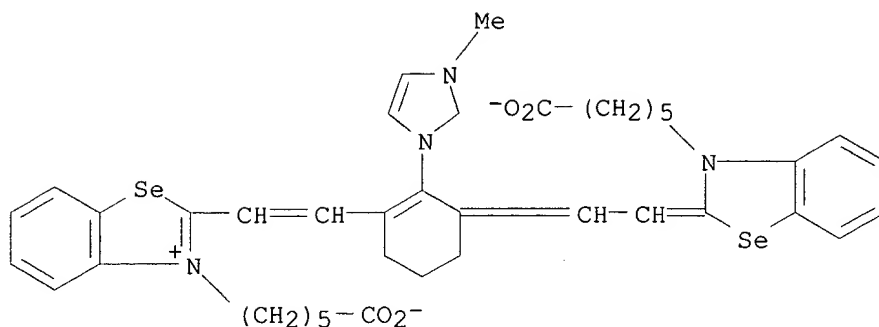
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CN Benzoselenazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzoselenazolylidene]ethylidene]-2-[4-(dimethylamino)pyridinio]-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



RN 174829-40-4 HCAPLUS

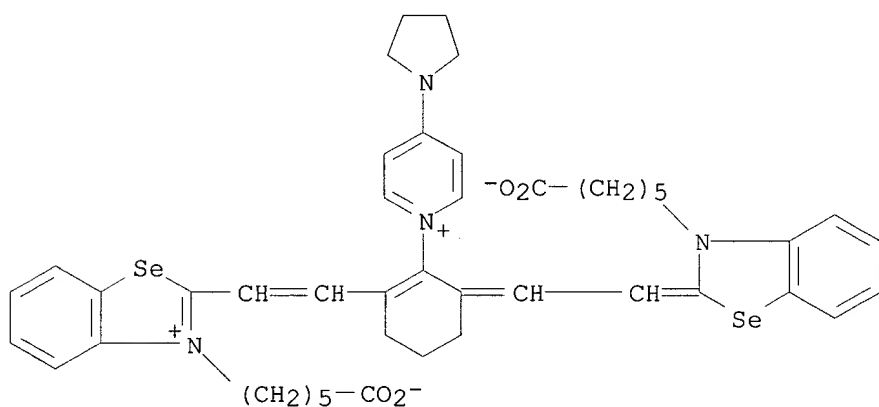
CN Benzoselenazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzoselenazolylidene]ethylidene]-2-(3-methyl-1H-imidazol-1-yl)-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



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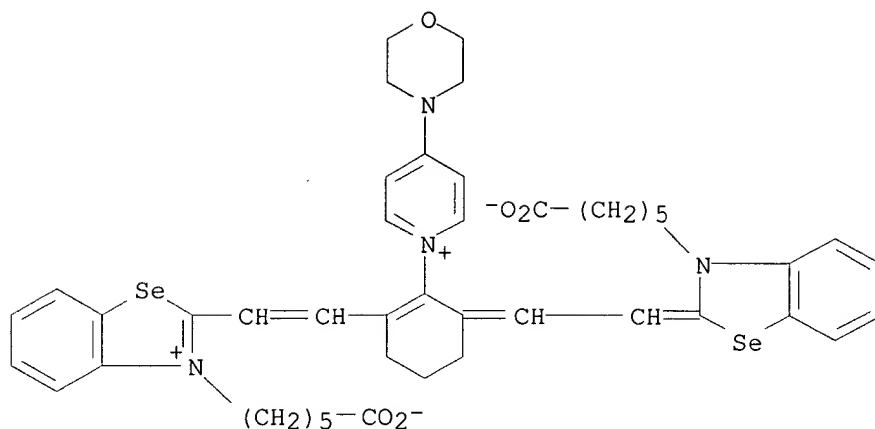
RN 174829-41-5 HCAPLUS

CN Benzoselenazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzoselenazolyldiene]ethylidene]-2-[4-(1-pyrrolidinyl)pyridinio]-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



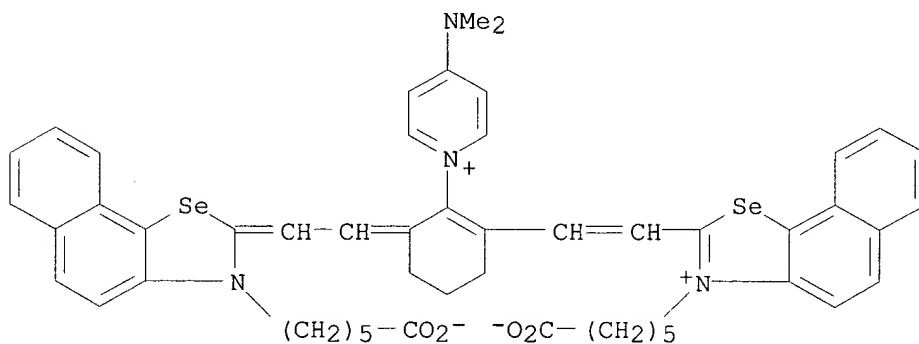
RN 174829-42-6 HCAPLUS

CN Benzoselenazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzoselenazolyldiene]ethylidene]-2-[4-(4-morpholinyl)pyridinio]-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



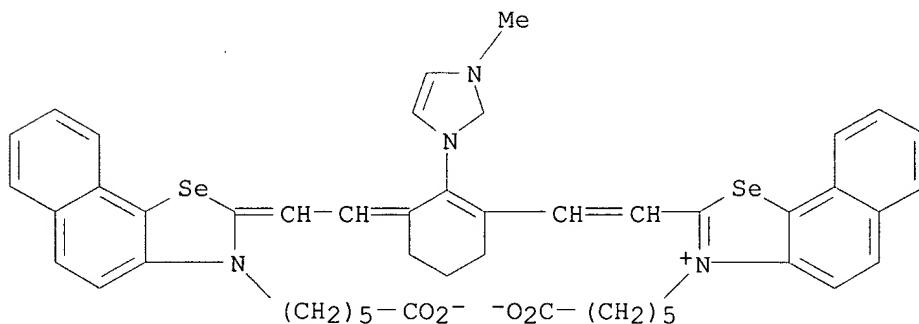
RN 174829-44-8 HCAPLUS

CN Naphtho[2,1-d]selenazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)naphtho[2,1-d]selenazol-2(3H)-ylidene]ethylidene]-2-[4-(dimethylamino)pyridinio]-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



RN 174829-45-9 HCAPLUS

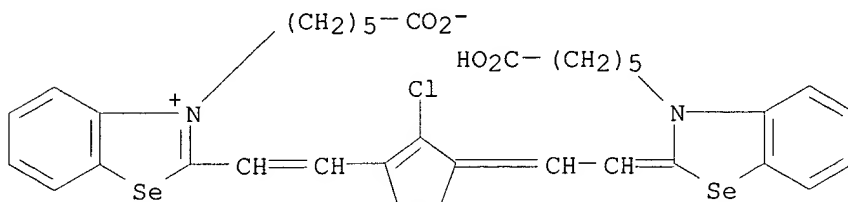
CN Naphtho[2,1-d]selenazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)naphtho[2,1-d]selenazol-2(3H)-ylidene]ethylidene]-2-(3-methyl-1H-imidazol-1-yl)-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

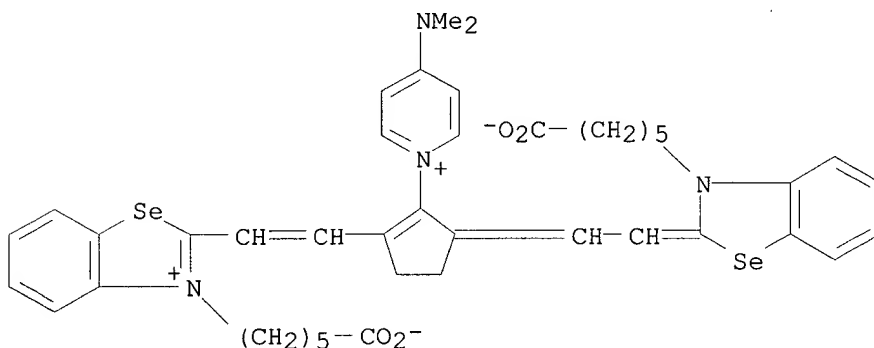
RN 174829-46-0 HCAPLUS

CN Benzoselenazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzoselenazolylidene]ethylidene]-2-chloro-1-cyclopenten-1-yl]ethenyl]-, inner salt (9CI) (CA INDEX NAME)



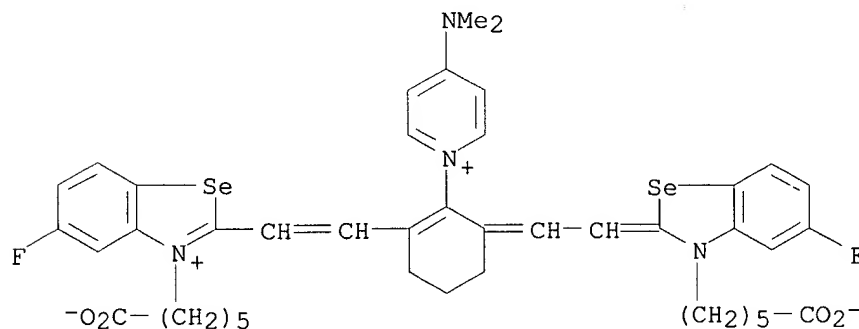
RN 174829-47-1 HCAPLUS

CN Benzoselenazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzoselenazolylidene]ethylidene]-2-[4-(dimethylamino)pyridinio]-1-cyclopenten-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



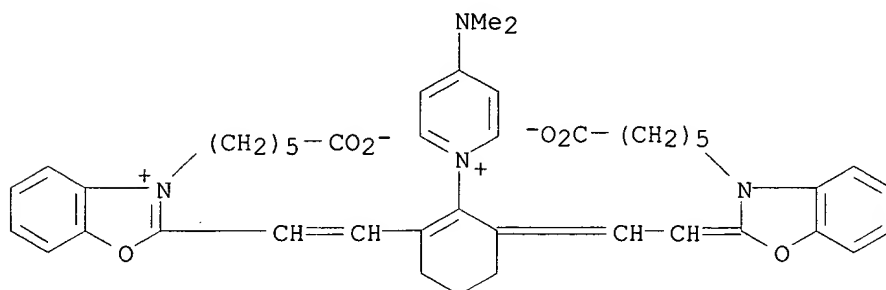
RN 174829-49-3 HCAPLUS

CN Benzoselenazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-5-fluoro-2(3H)-benzoselenazolylidene]ethylidene]-2-[4-(dimethylamino)pyridinio]-1-cyclohexen-1-yl]ethenyl]-5-fluoro-, bis(inner salt) (9CI) (CA INDEX NAME)



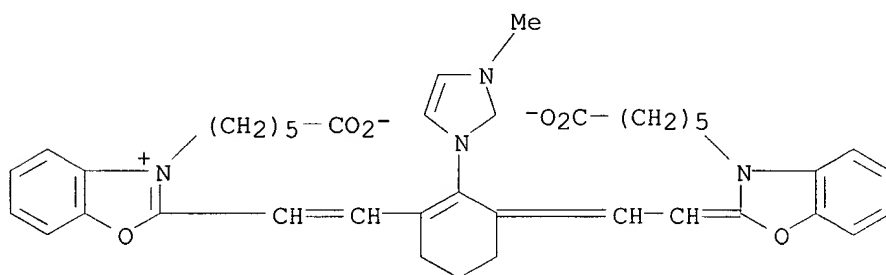
RN 174829-51-7 HCAPLUS

CN Benzoxazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzoxazolylidene]ethylidene]-2-[4-(dimethylamino)pyridinio]-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



RN 174829-52-8 HCAPLUS

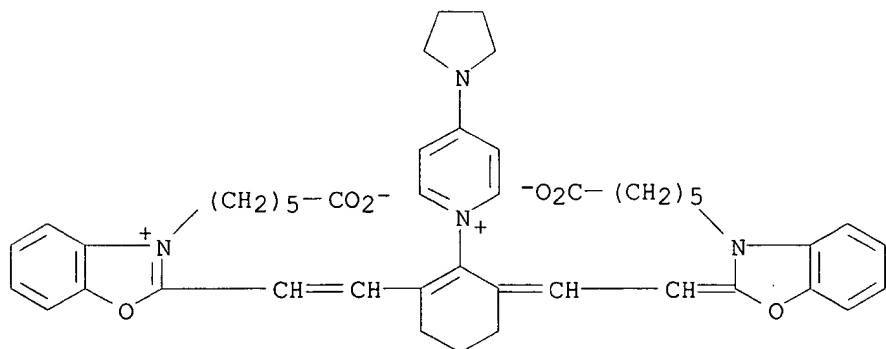
CN Benzoxazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzoxazolylidene]ethylidene]-2-(3-methyl-1H-imidazolium-1-yl)-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

RN 174829-53-9 HCAPLUS

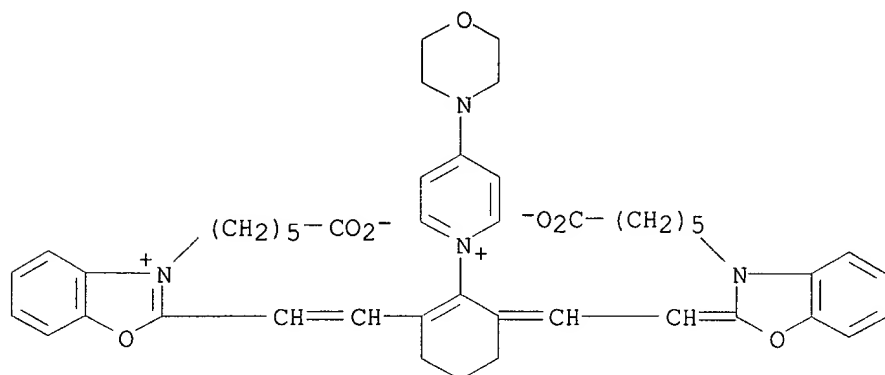
CN Benzoxazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzoxazolylidene]ethylidene]-2-[4-(1-pyrrolidinyl)pyridinio]-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



RN 174829-54-0 HCAPLUS

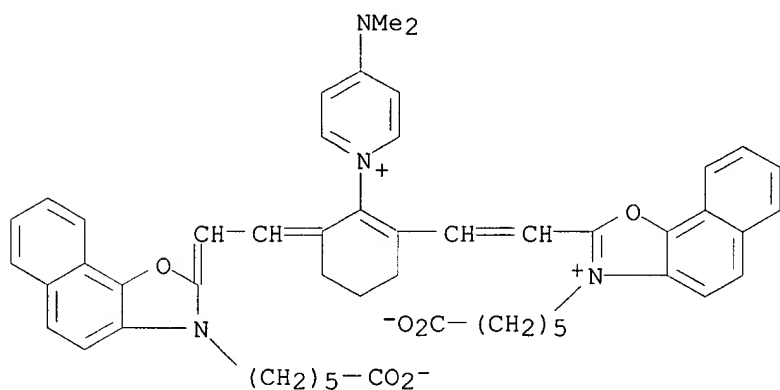
CN Benzoxazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-

benzoxazolylidene]ethylidene]-2-[4-(4-morpholinyl)pyridinio]-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



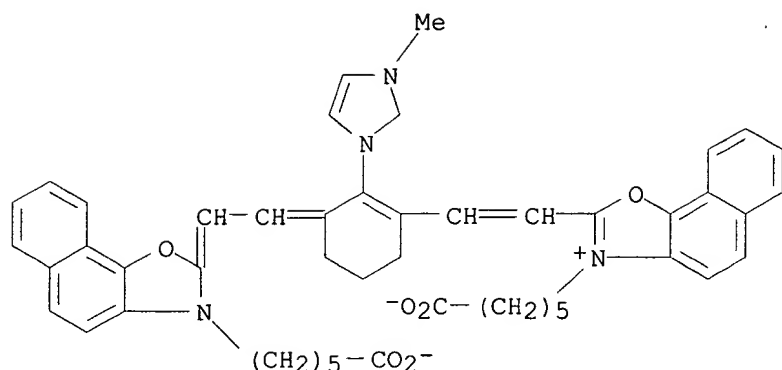
RN 174829-56-2 HCAPLUS

CN Naphth[2,1-d]oxazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)naphth[2,1-d]oxazol-2(3H)-ylidene]ethylidene]-2-[4-(dimethylamino)pyridinio]-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



RN 174829-57-3 HCAPLUS

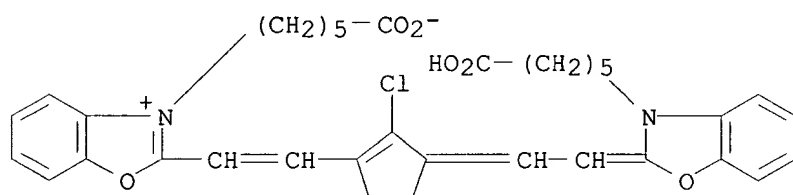
CN Naphth[2,1-d]oxazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)naphth[2,1-d]oxazol-2(3H)-ylidene]ethylidene]-2-(3-methyl-1H-imidazolium-1-yl)-1-cyclohexen-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

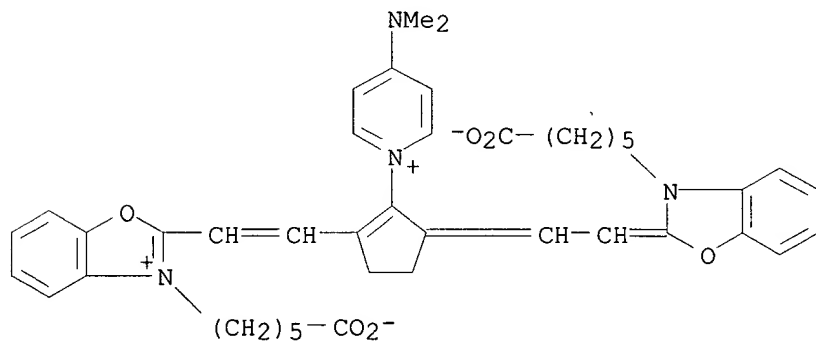
RN 174829-58-4 HCAPLUS

CN Benzoxazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzoxazolylidene]ethylidene]-2-chloro-1-cyclopenten-1-yl]ethenyl]-, inner salt (9CI) (CA INDEX NAME)



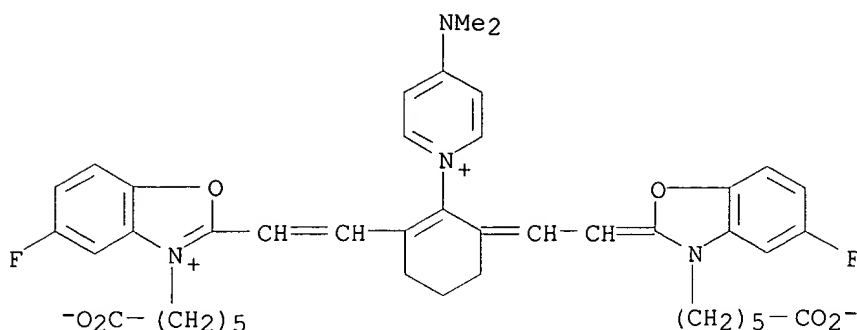
RN 174829-59-5 HCAPLUS

CN Benzoxazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzoxazolylidene]ethylidene]-2-[4-(dimethylamino)pyridinio]-1-cyclopenten-1-yl]ethenyl]-, bis(inner salt) (9CI) (CA INDEX NAME)



RN 174829-61-9 HCAPLUS

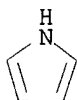
CN Benzoxazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-5-fluoro-2(3H)-benzoxazolylidene]ethylidene]-2-[4-(dimethylamino)pyridinio]-1-cyclohexen-1-yl]ethenyl]-5-fluoro-, bis(inner salt) (9CI) (CA INDEX NAME)



IT 109-97-7DP, Pyrrole, cyanine dyes contg. 110-86-1DP, Pyridine, cyanine dyes contg. 120-73-0DP, Purine, cyanine dyes contg. 151-56-4DP, Aziridine, cyanine dyes contg. 288-13-1DP, Pyrazole, cyanine dyes contg. 289-80-5DP, Pyridazine, cyanine dyes contg. 289-95-2DP, Pyrimidine, cyanine dyes contg. 290-37-9DP, Pyrazine, cyanine dyes contg. 541-59-3DP, 1H-Pyrrole-2,5-dione, cyanine dyes contg. 1122-58-3DP, cyanine dyes contg. 2767-91-1DP, 4-(4-Morpholinyl)pyridine, cyanine dyes contg. 2831-66-5DP, cyanine dyes contg. 6153-86-2DP, cyanine dyes contg. 16969-45-2DP, Pyridinium, cyanine dyes contg. 17009-89-1DP, 1-Methylimidazolium, cyanine dyes contg. 17009-90-4DP, Imidazolium, cyanine dyes contg. 22559-70-2DP, Quinolinium, cyanine dyes contg. 23715-85-7DP, Isoquinolinium, cyanine dyes contg. 82436-78-0DP, cyanine dyes contg. 104302-69-4DP, 3-(2-Pyridyldithio)propionamide, cyanine dyes contg. RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses) (N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as fluorescent labels for biopolymers and cells)

RN 109-97-7 HCAPLUS

CN 1H-Pyrrole (9CI) (CA INDEX NAME)



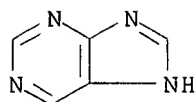
RN 110-86-1 HCAPLUS

CN Pyridine (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 120-73-0 HCAPLUS

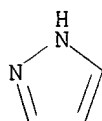
CN 1H-Purine (9CI) (CA INDEX NAME)



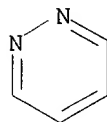
RN 151-56-4 HCAPLUS
CN Aziridine (9CI) (CA INDEX NAME)



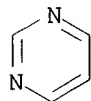
RN 288-13-1 HCAPLUS
CN 1H-Pyrazole (9CI) (CA INDEX NAME)



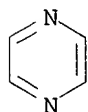
RN 289-80-5 HCAPLUS
CN Pyridazine (8CI, 9CI) (CA INDEX NAME)



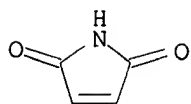
RN 289-95-2 HCAPLUS
CN Pyrimidine (8CI, 9CI) (CA INDEX NAME)



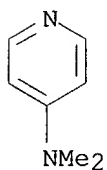
RN 290-37-9 HCAPLUS
CN Pyrazine (8CI, 9CI) (CA INDEX NAME)



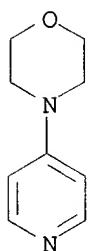
RN 541-59-3 HCAPLUS
CN 1H-Pyrrole-2,5-dione (9CI) (CA INDEX NAME)



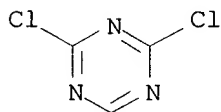
RN 1122-58-3 HCAPLUS
CN 4-Pyridinamine, N,N-dimethyl- (9CI) (CA INDEX NAME)



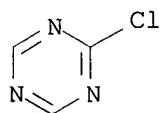
RN 2767-91-1 HCAPLUS
CN Morpholine, 4-(4-pyridinyl)- (9CI) (CA INDEX NAME)



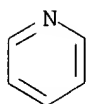
RN 2831-66-5 HCAPLUS
CN 1,3,5-Triazine, 2,4-dichloro- (9CI) (CA INDEX NAME)



RN 6153-86-2 HCAPLUS
CN 1,3,5-Triazine, 2-chloro- (9CI) (CA INDEX NAME)

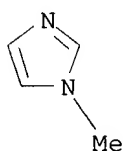


RN 16969-45-2 HCAPLUS
CN Pyridine, conjugate acid (8CI, 9CI) (CA INDEX NAME)



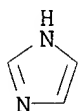
H⁺

RN 17009-89-1 HCAPLUS
CN 1H-Imidazole, 1-methyl-, conjugate monoacid (9CI) (CA INDEX NAME)



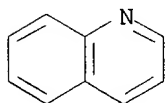
H⁺

RN 17009-90-4 HCAPLUS
CN 1H-Imidazole, conjugate monoacid (9CI) (CA INDEX NAME)



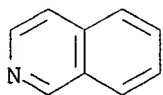
H⁺

RN 22559-70-2 HCAPLUS
CN Quinoline, conjugate acid (8CI, 9CI) (CA INDEX NAME)



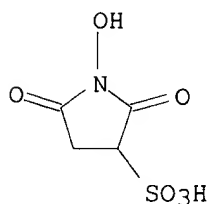
● H⁺

RN 23715-85-7 HCAPLUS
CN Isoquinoline, conjugate acid (8CI, 9CI) (CA INDEX NAME)

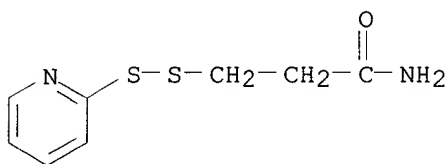


● H⁺

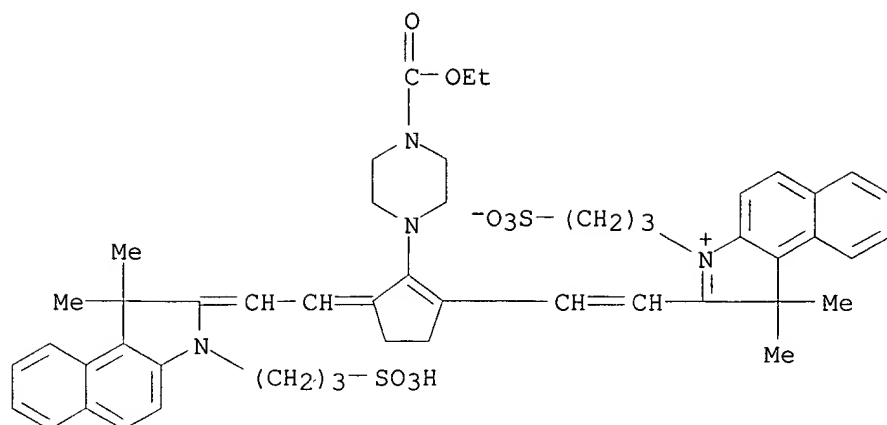
RN 82436-78-0 HCAPLUS
CN 3-Pyrrolidinesulfonic acid, 1-hydroxy-2,5-dioxo- (9CI) (CA INDEX NAME)



RN 104302-69-4 HCAPLUS
CN Propanamide, 3-(2-pyridinyldithio)- (9CI) (CA INDEX NAME)



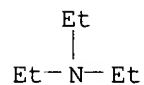
IT **54849-69-3**, IR 144 **144377-05-9**, Cy5
RL: PRP (Properties)
(N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as
fluorescent labels for biopolymers and cells)
RN 54849-69-3 HCAPLUS
CN 1H-Benz[e]indolium, 2-[2-[3-[[1,3-dihydro-1,1-dimethyl-3-(3-sulfopropyl)-
2H-benz[e]indol-2-ylidene]ethylidene]-2-[4-(ethoxycarbonyl)-1-piperazinyl]-
1-cyclopenten-1-yl]ethenyl]-1,1-dimethyl-3-(3-sulfopropyl)-, inner salt,
compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)
CM 1
CRN 55660-40-7
CMF C50 H58 N4 O8 S2



CM 2

CRN 121-44-8

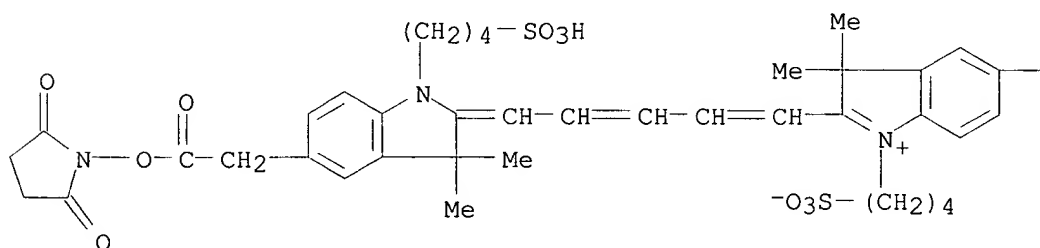
CMF C6 H15 N



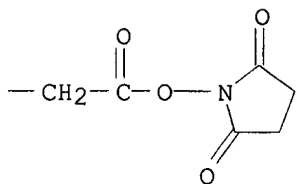
RN 144377-05-9 HCAPLUS

CN 3H-Indolium, 5-[2-[(2,5-dioxo-1-pyrrolidinyl)oxy]-2-oxoethyl]-2-[5-[5-[2-[(2,5-dioxo-1-pyrrolidinyl)oxy]-2-oxoethyl]-1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

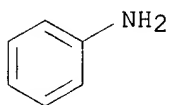
PAGE 1-A



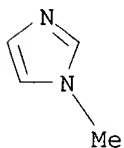
● Na



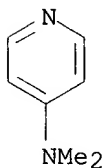
IT 62-53-3, Benzenamine, reactions 616-47-7,
 N-Methylimidazole 1122-58-3 1640-39-7
 6066-82-6, N-Hydroxysuccinimide 41532-84-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as
 fluorescent labels for biopolymers and cells)
 RN 62-53-3 HCAPLUS
 CN Benzenamine (9CI) (CA INDEX NAME)



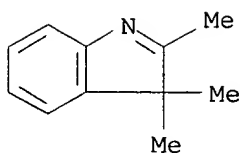
RN 616-47-7 HCAPLUS
 CN 1H-Imidazole, 1-methyl- (9CI) (CA INDEX NAME)



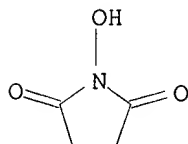
RN 1122-58-3 HCAPLUS
 CN 4-Pyridinamine, N,N-dimethyl- (9CI) (CA INDEX NAME)



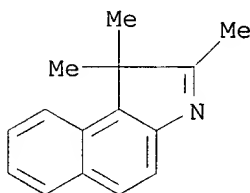
RN 1640-39-7 HCAPLUS
 CN 3H-Indole, 2,3,3-trimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



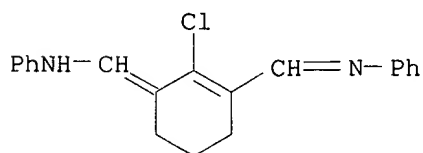
RN 6066-82-6 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-hydroxy- (9CI) (CA INDEX NAME)



RN 41532-84-7 HCAPLUS
CN 1H-Benz[e]indole, 1,1,2-trimethyl- (9CI) (CA INDEX NAME)

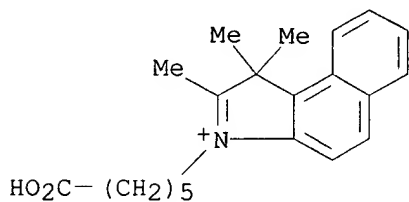


IT 63857-00-1P 171429-39-3P 174829-14-2P
174829-19-7P 174829-22-2P 174829-24-4P
174829-26-6P 174829-31-3P 174829-36-8P
174829-38-0P 174829-43-7P 174829-48-2P
174829-50-6P 174829-55-1P 174829-60-8P
174829-62-0P 174829-63-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as
fluorescent labels for biopolymers and cells)
RN 63857-00-1 HCAPLUS
CN Benzenamine, N-[[2-chloro-3-[(phenylamino)methylene]-1-cyclohexen-1-yl]methylene]-, monohydrochloride (9CI) (CA INDEX NAME)



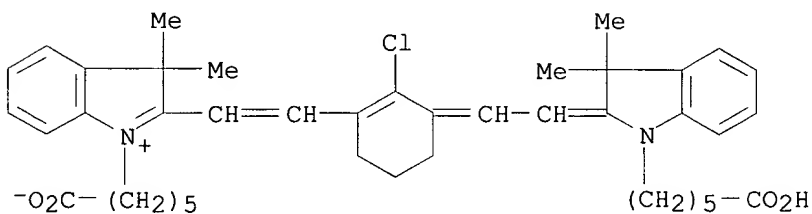
HCl

RN 171429-39-3 HCAPLUS
 CN 1H-Benz[e]indolium, 3-(5-carboxypentyl)-1,1,2-trimethyl-, bromide (9CI)
 (CA INDEX NAME)

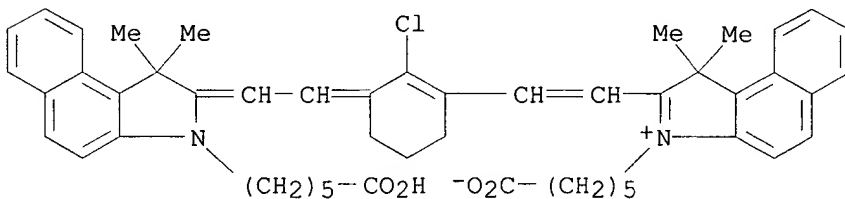


● Br⁻

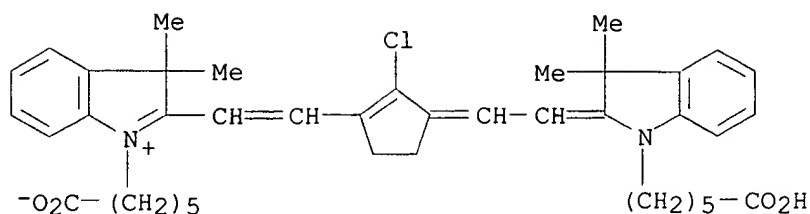
RN 174829-14-2 HCAPLUS
 CN 3H-Indolium, 1-(5-carboxypentyl)-2-[2-[3-[[1-(5-carboxypentyl)-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]ethylidene]-2-chloro-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-, inner salt (9CI) (CA INDEX NAME)



RN 174829-19-7 HCAPLUS
 CN 1H-Benz[e]indolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene]ethylidene]-2-chloro-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-, inner salt (9CI) (CA INDEX NAME)

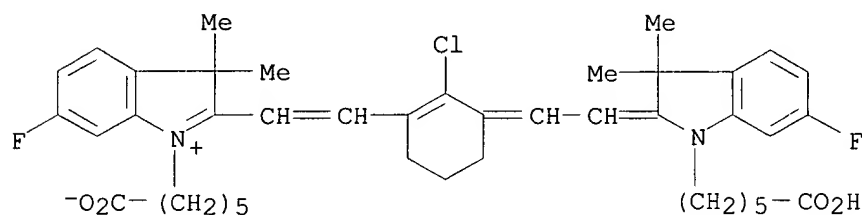


RN 174829-22-2 HCAPLUS
 CN 3H-Indolium, 1-(5-carboxypentyl)-2-[2-[3-[[1-(5-carboxypentyl)-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]ethylidene]-2-chloro-1-cyclopenten-1-yl]ethenyl]-3,3-dimethyl-, inner salt (9CI) (CA INDEX NAME)



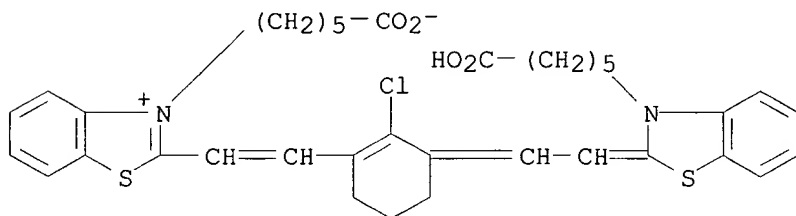
RN 174829-24-4 HCAPLUS

CN 3H-Indolium, 1-(5-carboxypentyl)-2-[2-[3-[[1-(5-carboxypentyl)-6-fluoro-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]ethylidene]-2-chloro-1-cyclohexen-1-yl]ethenyl]-6-fluoro-3,3-dimethyl-, inner salt (9CI) (CA INDEX NAME)



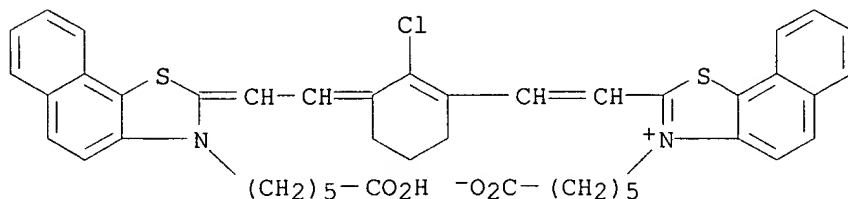
RN 174829-26-6 HCAPLUS

CN Benzothiazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzothiazolyliidene]ethylidene]-2-chloro-1-cyclohexen-1-yl]ethenyl]-, inner salt (9CI) (CA INDEX NAME)



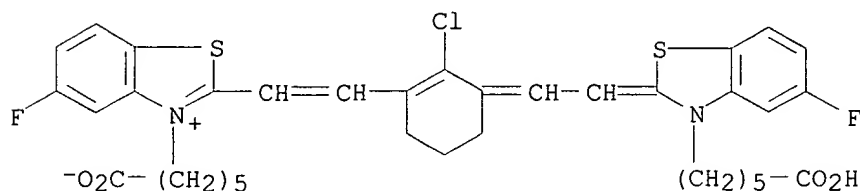
RN 174829-31-3 HCAPLUS

CN Naphtho[2,1-d]thiazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-naphtho[2,1-d]thiazol-2(3H)-ylidene]ethylidene]-2-chloro-1-cyclohexen-1-yl]ethenyl]-, inner salt (9CI) (CA INDEX NAME)



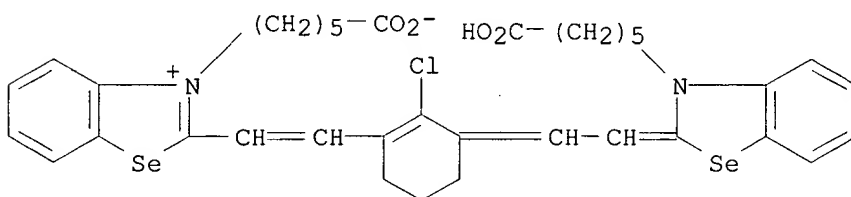
RN 174829-36-8 HCAPLUS

CN Benzothiazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-5-fluoro-2(3H)-benzothiazolylidene]ethylidene]-2-chloro-1-cyclohexen-1-yl]ethenyl]-5-fluoro-, inner salt (9CI) (CA INDEX NAME)



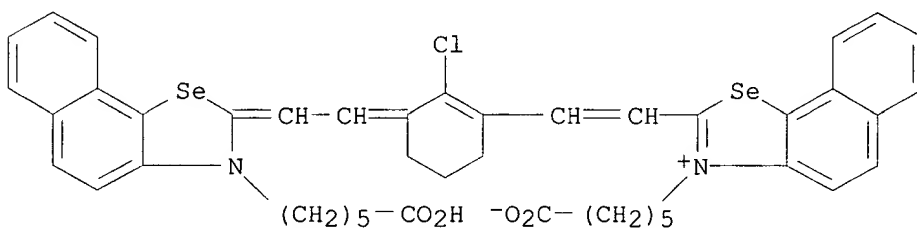
RN 174829-38-0 HCAPLUS

CN Benzoselenazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzoselenazolylidene]ethylidene]-2-chloro-1-cyclohexen-1-yl]ethenyl]-, inner salt (9CI) (CA INDEX NAME)



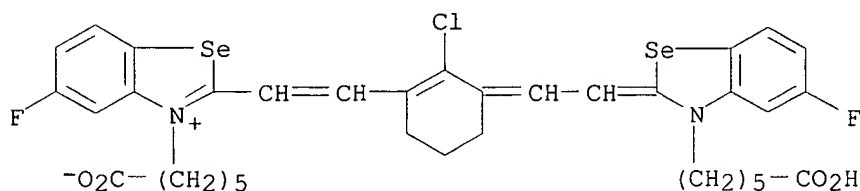
RN 174829-43-7 HCAPLUS

CN Naphtho[2,1-d]selenazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)naphtho[2,1-d]selenazol-2(3H)-ylidene]ethylidene]-2-chloro-1-cyclohexen-1-yl]ethenyl]-, inner salt (9CI) (CA INDEX NAME)



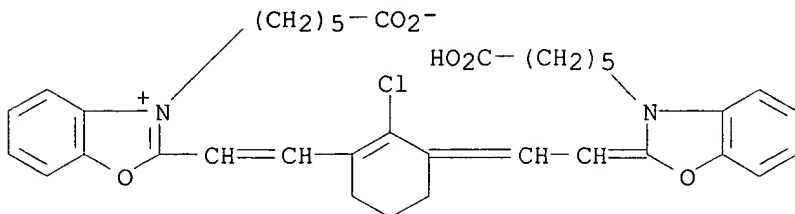
RN 174829-48-2 HCAPLUS

CN Benzoselenazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-5-fluoro-2(3H)-benzoselenazolylidene]ethylidene]-2-chloro-1-cyclohexen-1-yl]ethenyl]-5-fluoro-, inner salt (9CI) (CA INDEX NAME)



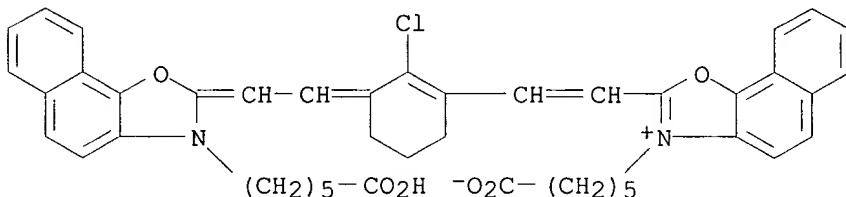
RN 174829-50-6 HCAPLUS

CN Benzoxazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-2(3H)-benzoxazolylidene]ethylidene]-2-chloro-1-cyclohexen-1-yl]ethenyl]-, inner salt (9CI) (CA INDEX NAME)



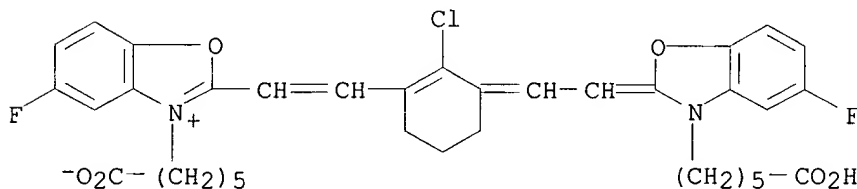
RN 174829-55-1 HCAPLUS

CN Naphth[2,1-d]oxazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)naphth[2,1-d]oxazol-2(3H)-ylidene]ethylidene]-2-chloro-1-cyclohexen-1-yl]ethenyl]-, inner salt (9CI) (CA INDEX NAME)



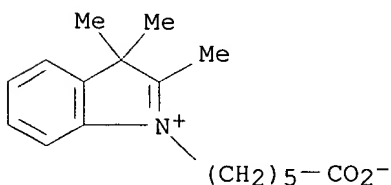
RN 174829-60-8 HCAPLUS

CN Benzoxazolium, 3-(5-carboxypentyl)-2-[2-[3-[[3-(5-carboxypentyl)-5-fluoro-2(3H)-benzoxazolylidene]ethylidene]-2-chloro-1-cyclohexen-1-yl]ethenyl]-5-fluoro-, inner salt (9CI) (CA INDEX NAME)

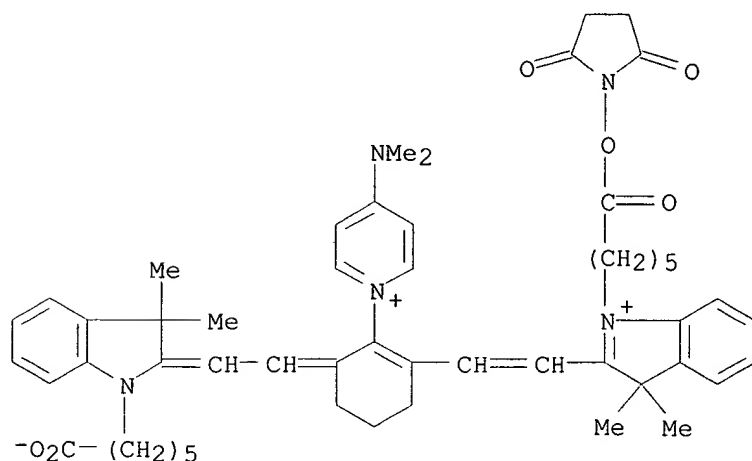


RN 174829-62-0 HCAPLUS

CN 3H-Indolium, 1-(5-carboxypentyl)-2,3,3-trimethyl-, inner salt (9CI) (CA INDEX NAME)



RN 174829-63-1 HCAPLUS
 CN 3H-Indolium, 2-[2-[3-[[1-(5-carboxypentyl)-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]ethylidene]-2-[4-(dimethylamino)pyridinio]-1-cyclohexen-1-yl]ethenyl]-1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-3,3-dimethyl-, mono(inner salt) (9CI) (CA INDEX NAME)



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IC ICM G01N033-58

ICS C09B023-02; C09B023-00

CC 9-5 (Biochemical Methods)

Section cross-reference(s): 28

ST cyanine dye fluorescent label biopolymer cell; heteroarom ion substituted cyanine dye probe; iminium ion substituted cyanine dye label

IT Cell

Dyes, cyanine

Photolysis

Ultraviolet and visible spectra

(N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as fluorescent labels for biopolymers and cells)

IT Antibodies

Biopolymers

Carbohydrates and Sugars, reactions

Deoxyribonucleic acids

RL: RCT (Reactant); RACT (Reactant or reagent)

(N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as fluorescent labels for biopolymers and cells)

IT Functional groups

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(azidonitrophenyl, cyanine dyes contg.; N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as fluorescent labels for biopolymers and cells)

IT Acid halides

Aldehydes, preparation

Azides

Carboxylic acids, preparation

Cyanates

Disulfides

Esters, preparation

Sulfonic acids, preparation

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(cyanine dyes contg.; N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as fluorescent labels for biopolymers and cells)

IT Iminium compounds

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(ions, cyanine dyes substituted with; N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as fluorescent labels for biopolymers and cells)

IT Immunoglobulins

RL: RCT (Reactant); RACT (Reactant or reagent)
(G, N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as fluorescent labels for biopolymers and cells)

IT Heterocyclic compounds

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(arom., ions, cyanine dyes substituted with; N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as fluorescent labels for biopolymers and cells)

IT Molecules

(biochem., N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as fluorescent labels for biopolymers and cells)

IT Esters, preparation

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(imido, cyanine dyes contg.; N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as fluorescent labels for biopolymers and cells)

IT Fluorescent substances

(probes, N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as fluorescent labels for biopolymers and cells)

IT 174829-15-3P 174829-16-4P 174829-17-5P

174829-18-6P 174829-20-0P 174829-21-1P

174829-23-3P 174829-25-5P 174829-27-7P

174829-28-8P 174829-29-9P 174829-30-2P

174829-32-4P 174829-33-5P 174829-34-6P

174829-35-7P 174829-37-9P 174829-39-1P

174829-40-4P 174829-41-5P 174829-42-6P

174829-44-8P 174829-45-9P 174829-46-0P

174829-47-1P 174829-49-3P 174829-51-7P

174829-52-8P 174829-53-9P 174829-54-0P

174829-56-2P 174829-57-3P 174829-58-4P

174829-59-5P 174829-61-9P

RL: ARG (Analytical reagent use); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as fluorescent labels for biopolymers and cells)

IT 107-22-2DP, Glyoxal, cyanine dyes contg. 109-97-7DP, Pyrrole, cyanine dyes contg. 110-86-1DP, Pyridine, cyanine dyes contg.

120-73-0DP, Purine, cyanine dyes contg. 151-56-4DP,

Aziridine, cyanine dyes contg. 288-13-1DP, Pyrazole, cyanine

dyes contg. 289-80-5DP, Pyridazine, cyanine dyes contg.

289-95-2DP, Pyrimidine, cyanine dyes contg. 290-37-9DP,

Pyrazine, cyanine dyes contg. 302-01-2DP, Hydrazine, cyanine dyes contg.

541-59-3DP, 1H-Pyrrole-2,5-dione, cyanine dyes contg.

1122-58-3DP, cyanine dyes contg. 2767-91-1DP,

4-(4-Morpholinyl)pyridine, cyanine dyes contg. 2831-66-5DP,
cyanine dyes contg. 6153-86-2DP, cyanine dyes contg.
7704-34-9DP, Sulfur, cyanine dyes contg. 7782-44-7DP, Oxygen, cyanine
dyes contg. 7782-49-2DP, Selenium, cyanine dyes contg.
16969-45-2DP, Pyridinium, cyanine dyes contg. 17009-89-1DP
, 1-Methylimidazolium, cyanine dyes contg. 17009-90-4DP,
Imidazolium, cyanine dyes contg. 22559-70-2DP, Quinolinium,
cyanine dyes contg. 23715-85-7DP, Isoquinolinium, cyanine dyes
contg. 82436-78-0DP, cyanine dyes contg. 104302-69-4DP
, 3-(2-Pyridyldithio)propionamide, cyanine dyes contg.
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST
(Analytical study); PREP (Preparation); USES (Uses)
(N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as
fluorescent labels for biopolymers and cells)

IT 54849-69-3, IR 144 144377-05-9, Cy5 169799-14-8, Cy7
RL: PRP (Properties)
(N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as
fluorescent labels for biopolymers and cells)

IT 62-53-3, Benzenamine, reactions 68-12-2, DMF, reactions
108-94-1, Cyclohexanone, reactions 616-47-7, N-Methylimidazole
1122-58-3 1640-39-7 4224-70-8, 6-Bromohexanoic acid
6066-82-6, N-Hydroxysuccinimide 10025-87-3, Phosphorus
oxychloride 41532-84-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as
fluorescent labels for biopolymers and cells)

IT 63857-00-1P 171429-39-3P 174829-14-2P
174829-19-7P 174829-22-2P 174829-24-4P
174829-26-6P 174829-31-3P 174829-36-8P
174829-38-0P 174829-43-7P 174829-48-2P
174829-50-6P 174829-55-1P 174829-60-8P
174829-62-0P 174829-63-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(N-heteroarom. ion- and iminium ion-substituted cyanine dyes prepn. as
fluorescent labels for biopolymers and cells)

IT 302-04-5P, Isothiocyanate, preparation
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST
(Analytical study); PREP (Preparation); USES (Uses)
(cyanine dyes contg.; N-heteroarom. ion- and iminium ion-substituted
cyanine dyes prepn. as fluorescent labels for biopolymers and cells)

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L12 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2001:753071 HCAPLUS
 DOCUMENT NUMBER: 135:303873
 TITLE: **Fluorescent** labeled **nucleotides**,
 synthesis and application as probes and primers
 INVENTOR(S): **Shinoki, Hiroshi; Inomata, Hiroko;**
Kojima, Masayoshi; Sudo, Yukio;
Seshimoto, Osamu
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001288197	A2	20011016	JP 2000-107675	20000410
US 2002064782	A1	20020530	US 2001-829467	20010409
EP 1152008	A2	20011107	EP 2001-107864	20010410
EP 1152008	A3	20020320		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO

PRIORITY APPLN. INFO.: JP 2000-107675 A 20000410
 OTHER SOURCE(S): MARPAT 135:303873

AB The present invention provides a **fluorescent** substance which is represented by a formula: A-B-C wherein A is a residue of natural or synthetic **nucleotide**, oligonucleotide, polynucleotide, or deriv. thereof, and binds to B at a base moiety in said residue; B is a divalent linking group or a single bond; and C is a deriv. of **fluorescent** dye having 0 or 1 sulfonate or phosphate moiety. **Fluorescent** dye is **cyanine**, **melocyanine**, or **styryl**. Preferably A is AMP, ADP, ATP, GMP, GDP, GTP, CMP, CDP, CTP, UMP, UDP, UTP, TMP, TDP, TTP, 2-Me-AMP, 2-Me-ADP, 2-Me-ATP, 1-Me-GMP, 1-Me-GDP, 1-Me-GTP, 5-Me-CMP, 5-Me-CDP, 5-Me-CTP, 5-MeO-CMP, 5-MeO-CDP, 5-MeO-CTP. B is preferably -CH₂-, -CH=CH-, triple bond, -CO-, -O-, -S-, -NH-, or aminoaryl. Synthesis of labeled nucleic acids using the **nucleotides** via reverse transcription, terminal transferase reaction, random prime method, PCR, or nick translation, is claimed. The **fluorescent** substance of the present invention is useful as label for nucleic acids, reagent for detecting nucleic acids, or diagnostic reagent. Kits for nucleic acid detection are claimed. Synthesis of 8 indolenine **cyanine** compds. and conjugation with dUTP, and use for DNA probe prepn., are described.

IT 23065-05-6, **Styryl**
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (**fluorescent** labeled **nucleotide** synthesis and
 application as probes and primers)
 RN 23065-05-6 HCAPLUS
 CN Ethenyl, 2-phenyl- (9CI) (CA INDEX NAME)

HC=CH-Ph

IT 366451-16-3P 366451-17-4P 366451-18-5P
 366451-19-6P 366451-20-9P 366451-21-0P

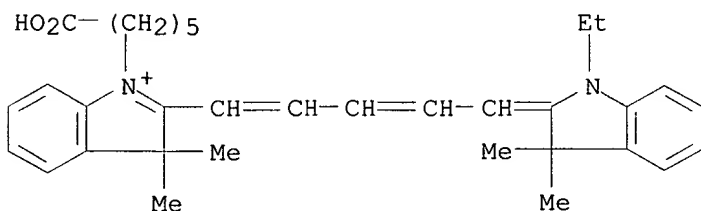
366451-22-1P 366451-23-2P

RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)

(fluorescent labeled nucleotide synthesis and application as probes and primers)

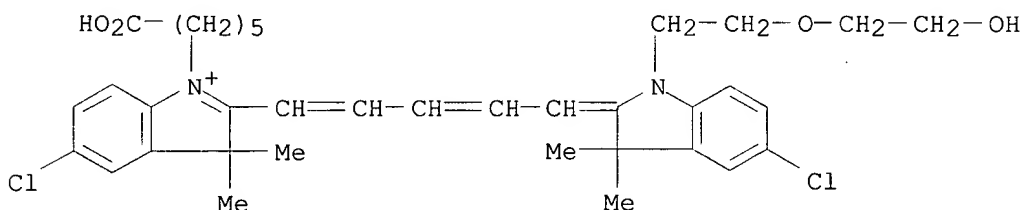
RN 366451-16-3 HCAPLUS

CN 3H-Indolium, 1-(5-carboxypentyl)-2-[5-(1-ethyl-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene)-1,3-pentadienyl]-3,3-dimethyl- (9CI) (CA INDEX NAME)



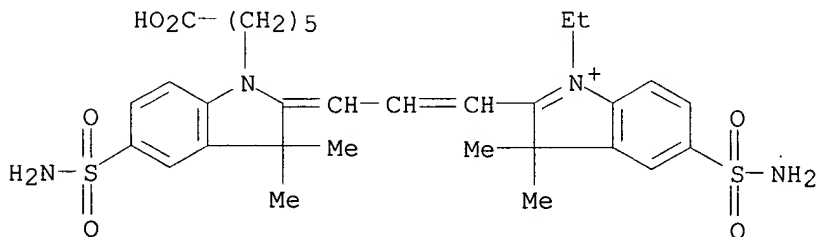
RN 366451-17-4 HCAPLUS

CN 3H-Indolium, 1-(5-carboxypentyl)-5-chloro-2-[5-[5-chloro-1,3-dihydro-1-[2-(2-hydroxyethoxy)ethyl]-3,3-dimethyl-2H-indol-2-ylidene]-1,3-pentadienyl]-3,3-dimethyl- (9CI) (CA INDEX NAME)



RN 366451-18-5 HCAPLUS

CN 3H-Indolium, 5-(aminosulfonyl)-2-[3-[5-(aminosulfonyl)-1-(5-carboxypentyl)-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl- (9CI) (CA INDEX NAME)

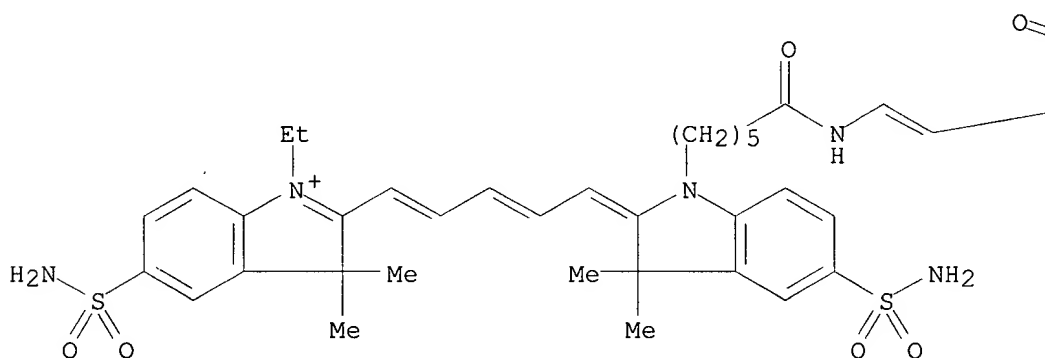


RN 366451-19-6 HCAPLUS

CN 3H-Indolium, 1-(5-carboxypentyl)-5-chloro-2-[3-[5-chloro-1,3-dihydro-1-[2-(2-hydroxyethoxy)ethyl]-3,3-dimethyl-2H-indol-2-ylidene]-1-propenyl]-3,3-dimethyl- (9CI) (CA INDEX NAME)

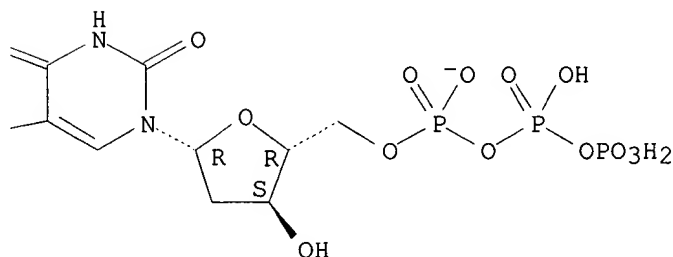
CN 3H-Indolium, 5-(aminosulfonyl)-2-[5-[5-(aminosulfonyl)-1-[6-[2-[1-[2-deoxy-5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-erythro-pentofuranosyl]-1,2,3,4-tetrahydro-2,4-dioxo-5-pyrimidinyl]ethenyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-, inner salt, trisodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



●₃ Na

PAGE 1-B

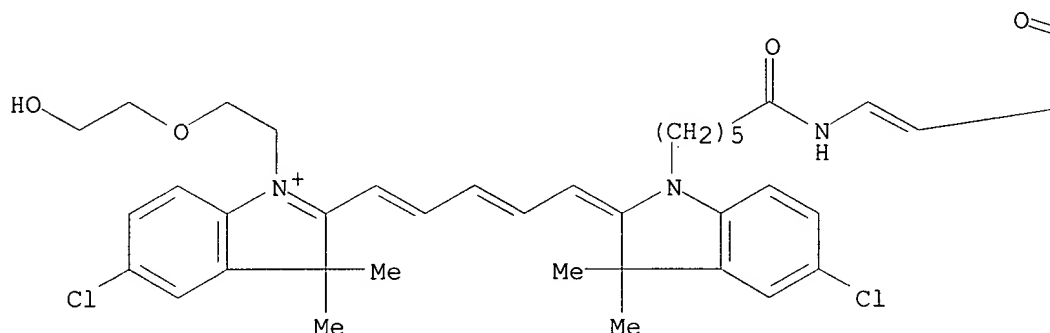


CN 3H-Indolium, 5-chloro-2-[5-[5-chloro-1-[6-[2-[1-[2-deoxy-5-O-

[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-erythro-pentofuranosyl]-1,2,3,4-tetrahydro-2,4-dioxo-5-pyrimidinyl]ethenyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1,3-pentadienyl]-1-[2-(2-hydroxyethoxy)ethyl]-3,3-dimethyl-, inner salt, trisodium salt (9CI) (CA INDEX NAME)

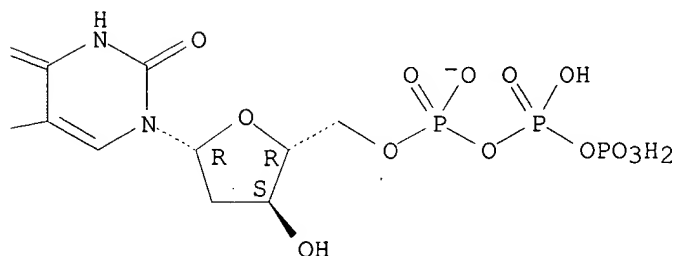
Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



● 3 Na

PAGE 1-B

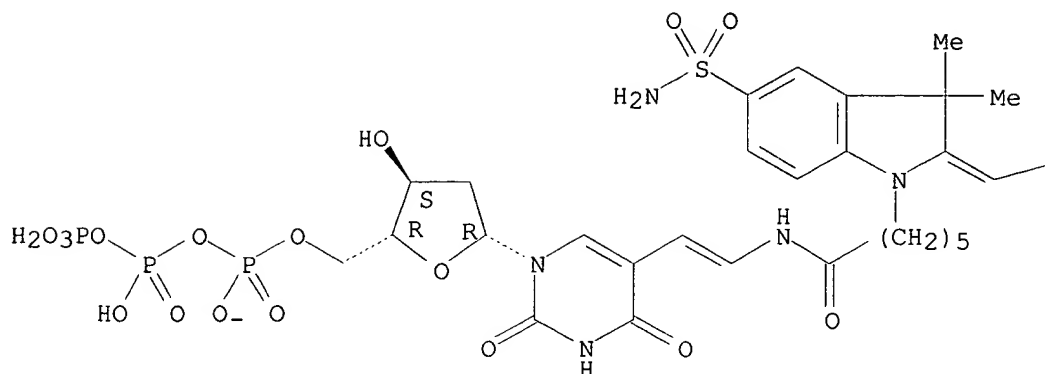


RN 366451-22-1 HCAPLUS

CN 3H-Indolium, 5-(aminosulfonyl)-2-[3-[5-(aminosulfonyl)-1-[6-[[2-[1-[2-deoxy-5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-erythro-pentofuranosyl]-1,2,3,4-tetrahydro-2,4-dioxo-5-pyrimidinyl]ethenyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-, inner salt, trisodium salt (9CI) (CA INDEX NAME)

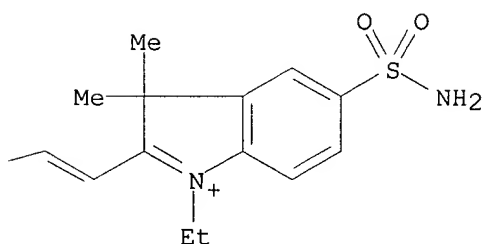
Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



●3 Na

PAGE 1-B

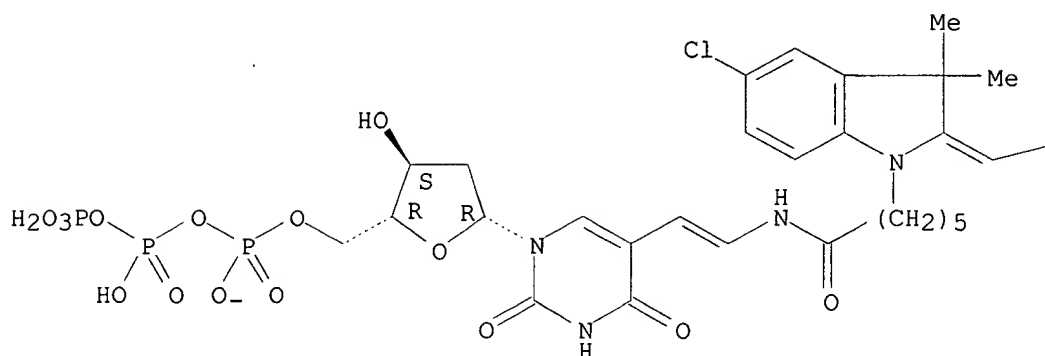


RN 366451-23-2 HCAPLUS

CN 3H-Indolium, 5-chloro-2-[3-[5-chloro-1-[6-[[2-[1-[2-deoxy-5-O'-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-erythro-pentofuranosyl]-1,2,3,4-tetrahydro-2,4-dioxo-5-pyrimidinyl]ethenyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1-propenyl]-1-[2-(2-hydroxyethoxy)ethyl]-3,3-dimethyl-, inner salt, trisodium salt (9CI)
(CA INDEX NAME)

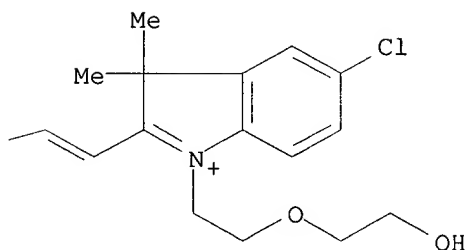
Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



●3 Na

PAGE 1-B



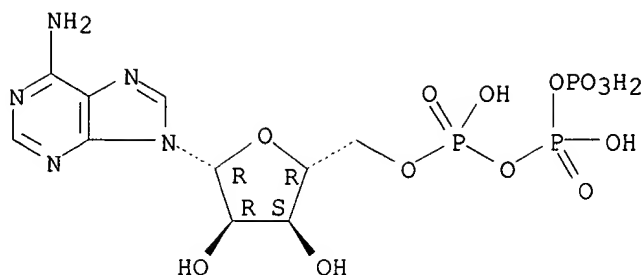
IT 56-65-5, 5'-ATP, reactions 58-64-0, 5'-ADP, reactions 58-97-9, 5'-UMP, reactions 58-98-0, 5'-UDP, reactions 61-19-8, 5'-AMP, reactions 63-37-6, CMP 63-38-7, CDP 63-39-8, 5'-UTP 65-47-4, 5'-CTP 85-32-5, 5'-GMP 86-01-1, 5'-GTP 95-50-1, 1, 2-Dichloro benzene 122-51-0, Triethyl orthoformate 146-91-8, 5'-GDP 365-07-1, DTMP 365-08-2, TTP 491-97-4, TDP 628-89-7 1173-82-6, DUTP 1173-82-6D, DUTP, aminoaryl 1927-31-7, DATP 2056-98-6, DCTP 2564-35-4, DGTP 3590-36-1 4224-70-8, 6-Bromo hexanoic acid 14315-97-0 20309-92-6 25981-83-3 39923-67-6 39923-68-7, 2-Methyl-ADP 42467-24-3, 2-Methyl-ATP 52940-67-7 52988-98-4 76528-21-7 80677-38-9 112242-04-3 130536-69-5 327174-86-7 366451-24-3

RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorescent labeled nucleotide synthesis and application as probes and primers)

RN 56-65-5 HCAPLUS

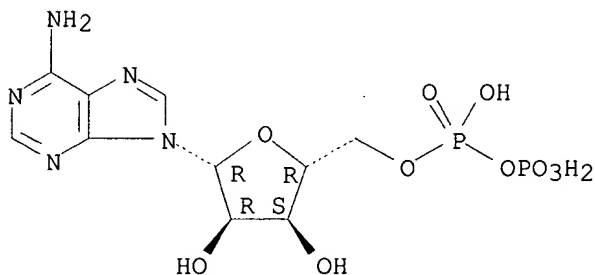
CN Adenosine 5'-(tetrahydrogen triphosphate) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



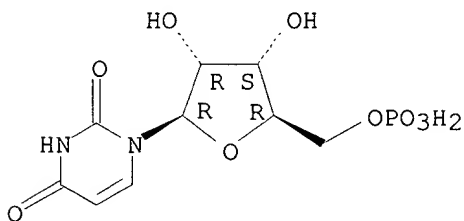
RN 58-64-0 HCAPLUS
 CN Adenosine 5'-(trihydrogen diphosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



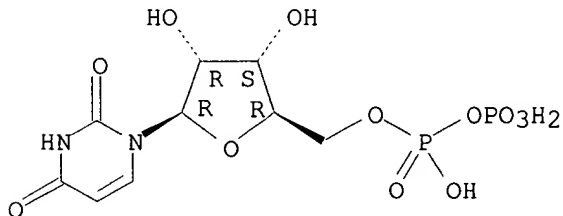
RN 58-97-9 HCAPLUS
 CN 5'-Uridylic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



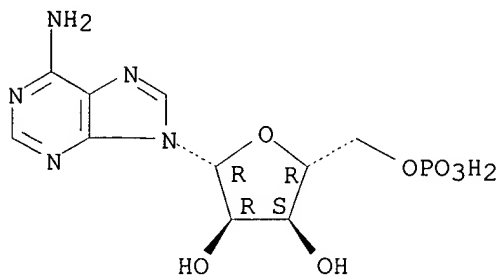
RN 58-98-0 HCAPLUS
 CN Uridine 5'-(trihydrogen diphosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



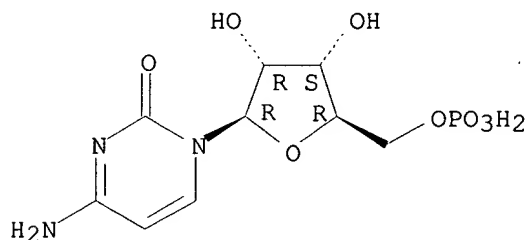
RN 61-19-8 HCAPLUS
CN 5'-Adenylic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



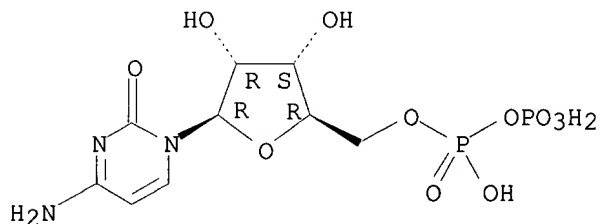
RN 63-37-6 HCAPLUS
CN 5'-Cytidylic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



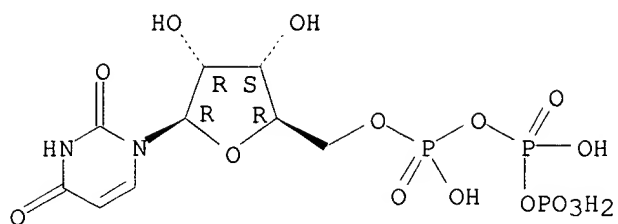
RN 63-38-7 HCAPLUS
CN Cytidine 5'-(trihydrogen diphosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



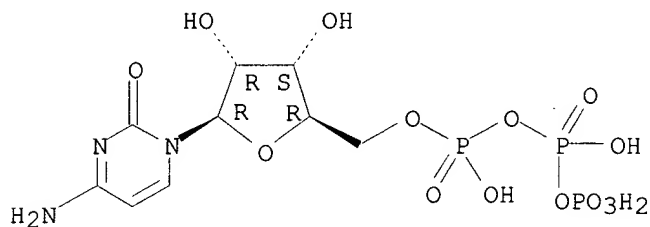
RN 63-39-8 HCAPLUS
CN Uridine 5'-(tetrahydrogen triphosphate) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



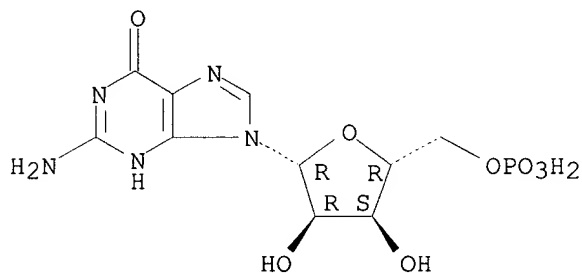
RN 65-47-4 HCAPLUS
 CN Cytidine 5'-(tetrahydrogen triphosphate) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



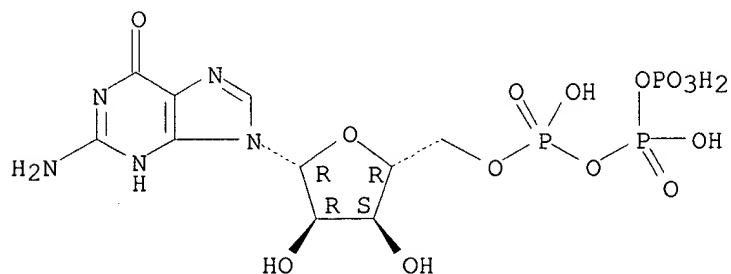
RN 85-32-5 HCAPLUS
 CN 5'-Guanylic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

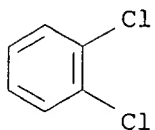


RN 86-01-1 HCAPLUS
 CN Guanosine 5'-(tetrahydrogen triphosphate) (8CI, 9CI) (CA INDEX NAME)

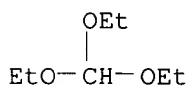
Absolute stereochemistry.



RN 95-50-1 HCAPLUS
 CN Benzene, 1,2-dichloro- (9CI) (CA INDEX NAME)

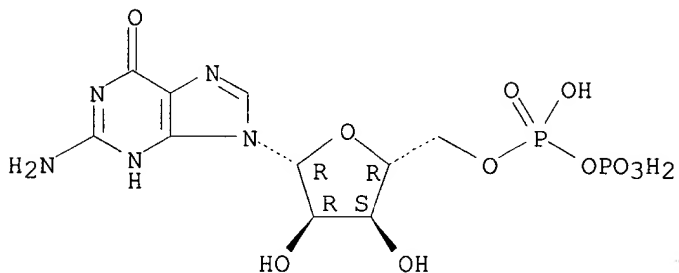


RN 122-51-0 HCAPLUS
 CN Ethane, 1,1',1''-[methylidynetris(oxy)]tris- (9CI) (CA INDEX NAME)



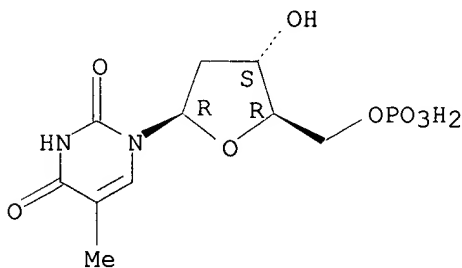
RN 146-91-8 HCAPLUS
 CN Guanosine 5'-(trihydrogen diphosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



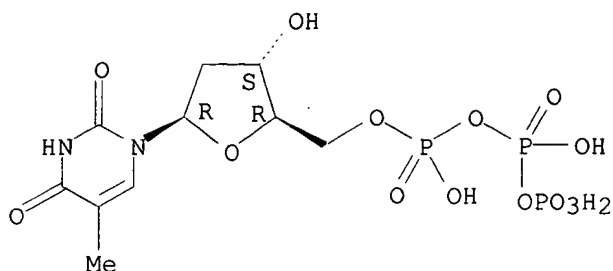
RN 365-07-1 HCAPLUS
 CN 5'-Thymidylic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



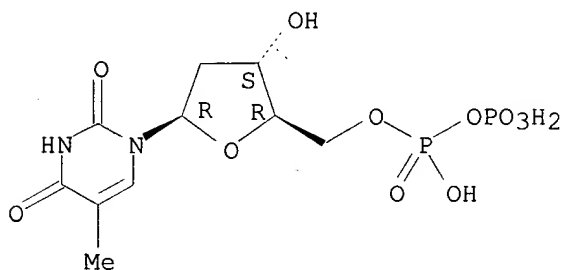
RN 365-08-2 HCAPLUS
 CN Thymidine 5'-(tetrahydrogen triphosphate) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 491-97-4 HCAPLUS
CN Thymidine 5'-(trihydrogen diphosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

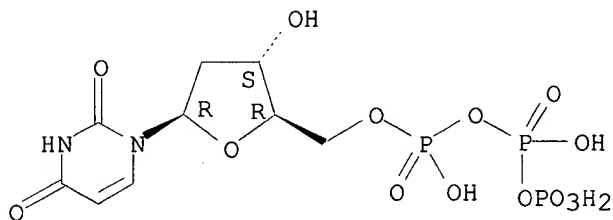


RN 628-89-7 HCAPLUS
CN Ethanol, 2-(2-chloroethoxy)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

ClCH₂-CH₂-O-CH₂-CH₂-OH

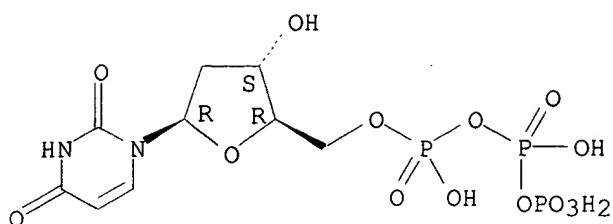
RN 1173-82-6 HCAPLUS
CN Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



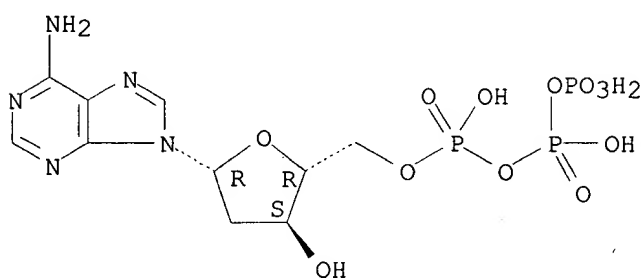
RN 1173-82-6 HCAPLUS
CN Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



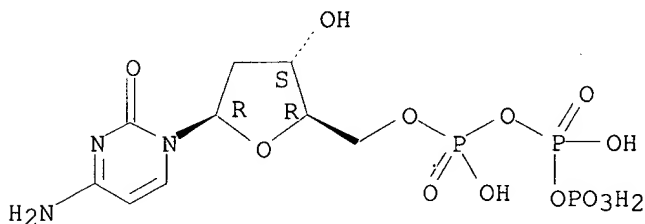
RN 1927-31-7 HCAPLUS
 CN Adenosine 5'-(tetrahydrogen triphosphate), 2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



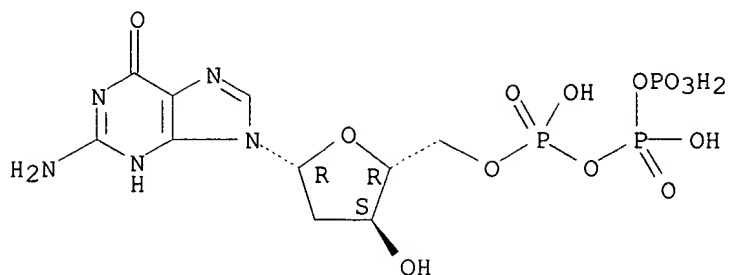
RN 2056-98-6 HCAPLUS
 CN Cytidine 5'-(tetrahydrogen triphosphate), 2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



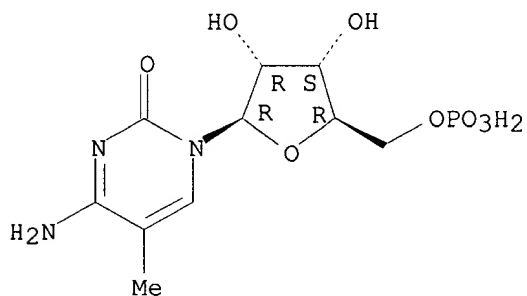
RN 2564-35-4 HCAPLUS
 CN Guanosine 5'-(tetrahydrogen triphosphate), 2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 3590-36-1 HCAPLUS
 CN 5'-Cytidylic acid, 5-methyl- (9CI) (CA INDEX NAME)

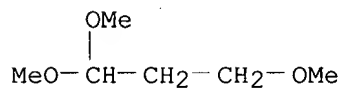
Absolute stereochemistry.



RN 4224-70-8 HCAPLUS
 CN Hexanoic acid, 6-bromo- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

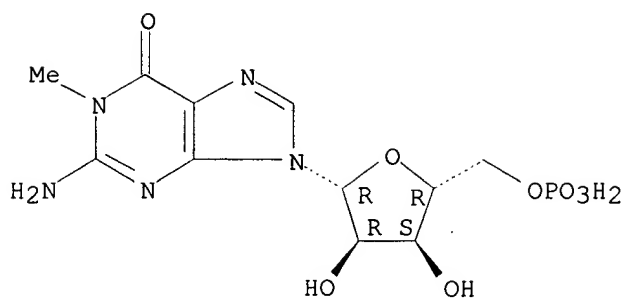
Br⁻ (CH₂)₅-CO₂H

RN 14315-97-0 HCAPLUS
 CN Propane, 1,1,3-trimethoxy- (9CI) (CA INDEX NAME)

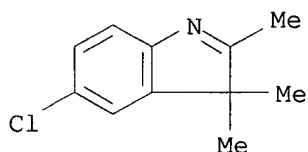


RN 20309-92-6 HCAPLUS
 CN 5'-Guanylic acid, 1-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

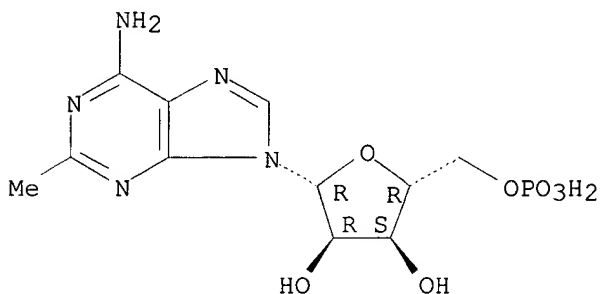


RN 25981-83-3 HCAPLUS
 CN 3H-Indole, 5-chloro-2,3,3-trimethyl- (8CI, 9CI) (CA INDEX NAME)



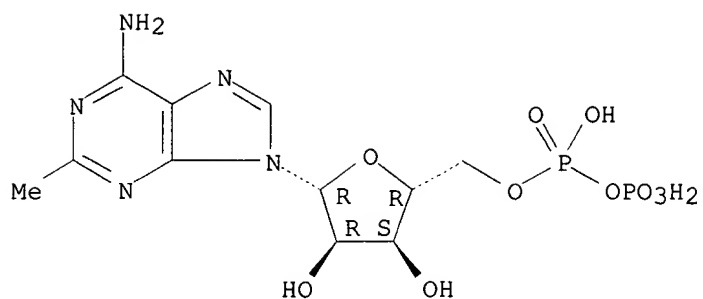
RN 39923-67-6 HCAPLUS
 CN 5'-Adenylic acid, 2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



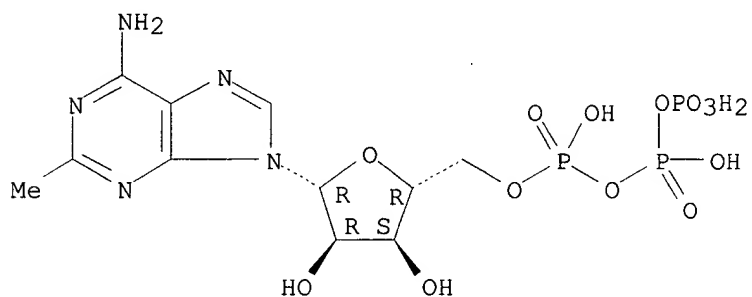
RN 39923-68-7 HCAPLUS
 CN Adenosine 5'-(trihydrogen diphosphate), 2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



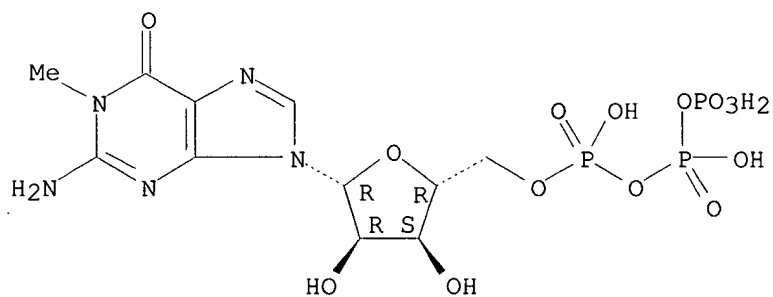
RN 42467-24-3 HCAPLUS
 CN Adenosine 5'-(tetrahydrogen triphosphate), 2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



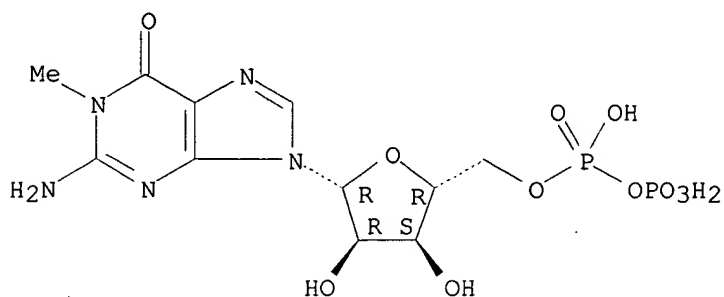
RN 52940-67-7 HCAPLUS
 CN Guanosine 5'-(tetrahydrogen triphosphate), 1-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



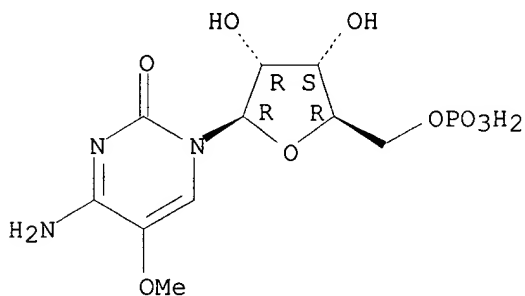
RN 52988-98-4 HCAPLUS
 CN Guanosine 5'-(trihydrogen diphosphate), 1-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



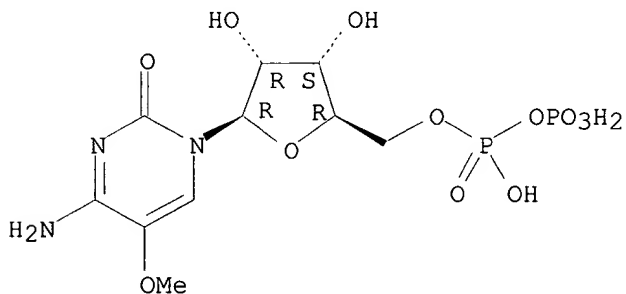
RN 76528-21-7 HCAPLUS
CN 5'-Cytidylic acid, 5-methoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



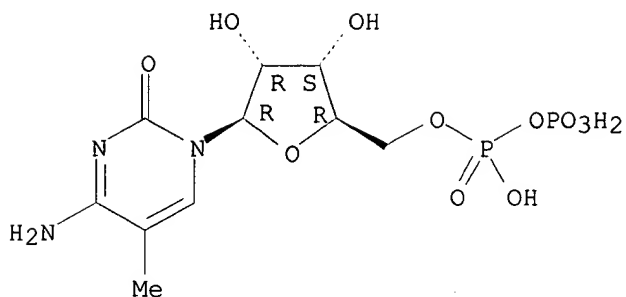
RN 80677-38-9 HCAPLUS
CN Cytidine 5'-(trihydrogen diphosphate), 5-methoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 112242-04-3 HCAPLUS
CN Cytidine 5'-(trihydrogen diphosphate), 5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 130536-69-5 HCAPLUS

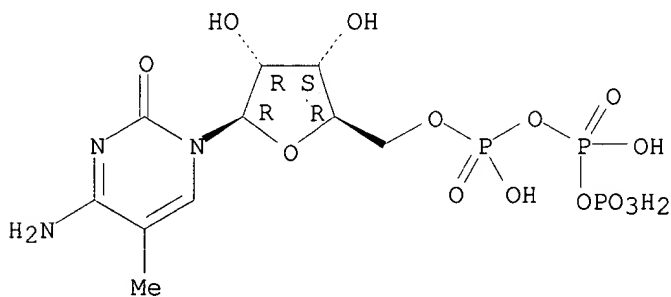
CN Ethanol, 2-(2-iodoethoxy)- (9CI) (CA INDEX NAME)

ICH₂-CH₂-O-CH₂-CH₂-OH

RN 327174-86-7 HCAPLUS

CN Cytidine 5'-(tetrahydrogen triphosphate), 5-methyl- (9CI) (CA INDEX NAME)

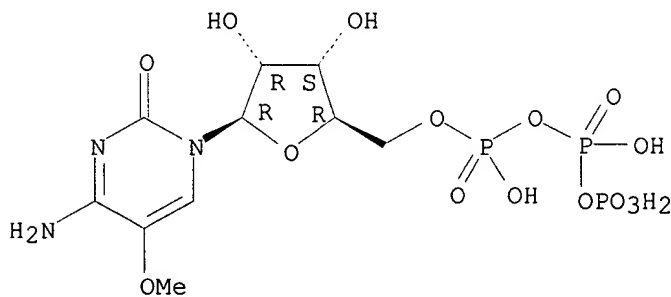
Absolute stereochemistry.



RN 366451-24-3 HCAPLUS

CN Cytidine 5'-(tetrahydrogen triphosphate), 5-methoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

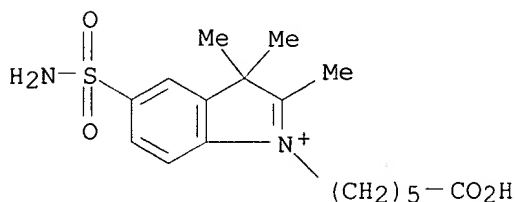


IT 366451-26-5DP, bromide 366451-27-6DP, bromide
366451-28-7DP, bromide

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**fluorescent** labeled **nucleotide** synthesis and application as probes and primers)

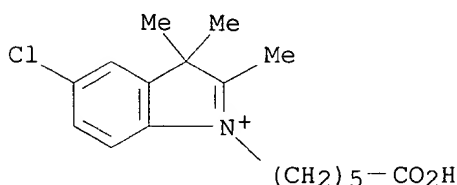
RN 366451-26-5 HCAPLUS

CN 3H-Indolium, 5-(aminosulfonyl)-1-(5-carboxypentyl)-2,3,3-trimethyl- (9CI)
(CA INDEX NAME)



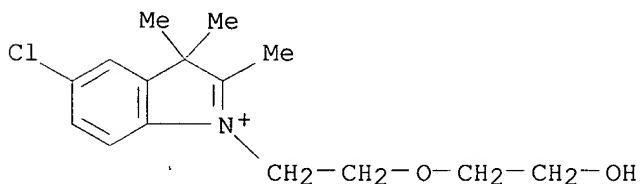
RN 366451-27-6 HCAPLUS

CN 3H-Indolium, 1-(5-carboxypentyl)-5-chloro-2,3,3-trimethyl- (9CI) (CA INDEX NAME)



RN 366451-28-7 HCAPLUS

CN 3H-Indolium, 5-chloro-1-[2-(2-hydroxyethoxy)ethyl]-2,3,3-trimethyl- (9CI)
(CA INDEX NAME)

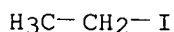


IT 75-03-6, Ethyl iodide 62306-05-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; **fluorescent** labeled **nucleotide** synthesis and application as probes and primers)

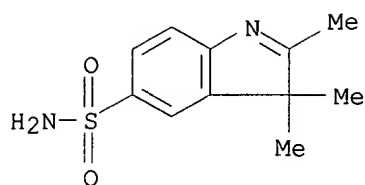
RN 75-03-6 HCAPLUS

CN Ethane, iodo- (8CI, 9CI) (CA INDEX NAME)

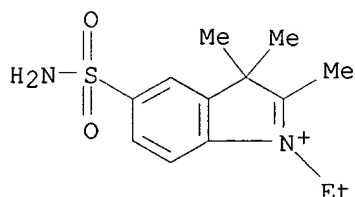


RN 62306-05-2 HCAPLUS

CN 3H-Indole-5-sulfonamide, 2,3,3-trimethyl- (9CI) (CA INDEX NAME)



IT **366451-25-4DP**, iodide
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (reactant; **fluorescent** labeled **nucleotide** synthesis and application as probes and primers)
 RN 366451-25-4 HCAPLUS
 CN 3H-Indolium, 5-(aminosulfonyl)-1-ethyl-2,3,3-trimethyl- (9CI) (CA INDEX NAME)



IC ICM C07H019-10
 ICS C07H019-20; C07H021-00; C09K011-06; C12N015-09; C12Q001-68; G01N033-58; C07D209-08; C07D209-30; C07D403-06; C07D403-14
 CC 28-1 (Heterocyclic Compounds (More Than One Hetero Atom))
 Section cross-reference(s): 3, 9
 ST **fluorescent** labeled **nucleotide** synthesis probe primer;
cyanine melocyanine styryl nucleotide synthesis probe primer
 IT Diagnosis
 (agents; **fluorescent** labeled **nucleotide** synthesis and application as probes and primers)
 IT Phosphates, biological studies
 Sulfonates
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (dye contg.; **fluorescent** labeled **nucleotide** synthesis and application as probes and primers)
 IT **Cyanine** dyes
Fluorescent dyes
 Test kits
 (**fluorescent** labeled **nucleotide** synthesis and application as probes and primers)
 IT **Nucleotides**, preparation
 Oligonucleotides
 Polynucleotides
 RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (**fluorescent** labeled **nucleotide** synthesis and application as probes and primers)
 IT Nucleic acid amplification (method)

(terminal transferase reaction, use in labeled nucleic acid synthesis;
fluorescent labeled **nucleotide** synthesis and
 application as probes and primers)

IT PCR (polymerase chain reaction)
 Reverse transcription
 (use in labeled nucleic acid synthesis; **fluorescent** labeled
nucleotide synthesis and application as probes and primers)

IT 23065-05-6, **Styryl**
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (**fluorescent** labeled **nucleotide** synthesis and
 application as probes and primers)

IT 366451-16-3P 366451-17-4P 366451-18-5P
 366451-19-6P 366451-20-9P 366451-21-0P
 366451-22-1P 366451-23-2P
 RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); SPN
 (Synthetic preparation); ANST (Analytical study); BIOL (Biological study);
 PREP (Preparation); USES (Uses)
 (**fluorescent** labeled **nucleotide** synthesis and
 application as probes and primers)

IT 56-65-5, 5'-ATP, reactions 58-64-0, 5'-ADP, reactions
 58-97-9, 5'-UMP, reactions 58-98-0, 5'-UDP, reactions
 61-19-8, 5'-AMP, reactions 63-37-6, CMP 63-38-7
 , CDP 63-39-8, 5'-UTP 65-47-4, 5'-CTP 85-32-5
 , 5'-GMP 86-01-1, 5'-GTP 95-50-1, 1, 2-Dichloro
 benzene 122-51-0, Triethyl orthoformate 146-91-8,
 5'-GDP 365-07-1, DTMP 365-08-2, TTP 491-97-4
 , TDP 628-89-7 1173-82-6, DUTP 1173-82-6D,
 DUTP, aminoaryl 1927-31-7, DATP 2056-98-6, DCTP
 2564-35-4, DGTP 3590-36-1 4224-70-8, 6-Bromo
 hexanoic acid 14315-97-0 20309-92-6 25981-83-3
 39923-67-6 39923-68-7, 2-Methyl-ADP 42467-24-3
 , 2-Methyl-ATP 52940-67-7 52988-98-4
 76528-21-7 80677-38-9 112242-04-3
 130536-69-5 327174-86-7 366451-24-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (**fluorescent** labeled **nucleotide** synthesis and
 application as probes and primers)

IT 366451-26-5DP, bromide 366451-27-6DP, bromide
 366451-28-7DP, bromide
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (**fluorescent** labeled **nucleotide** synthesis and
 application as probes and primers)

IT 75-03-6, Ethyl iodide 62306-05-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactant; **fluorescent** labeled **nucleotide** synthesis
 and application as probes and primers)

IT 366451-25-4DP, iodide
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (reactant; **fluorescent** labeled **nucleotide** synthesis
 and application as probes and primers)

=> d his

(FILE 'HOME' ENTERED AT 14:35:22 ON 28 AUG 2002)

FILE 'REGISTRY' ENTERED AT 14:35:35 ON 28 AUG 2002
ACT MAU467P/A

L1 STR
L2 45490 SEA FILE=REGISTRY SSS FUL L1
L3 STR L1
L4 23 S L3 SSS SAM SUB=L2
L5 541 S L3 SSS FUL SUB=L2
L6 43 S L5 AND (NCNC2-NCNC3/ES OR NCNC3/ES)

parent search

*Species search
for p. 21 of spec
which corresponds
to structures on
p. 2-6 of the
inventor search.*

subset search

FILE 'HCAPLUS' ENTERED AT 14:44:42 ON 28 AUG 2002

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L9 29 S L7 NOT L8
L10 10 S L9 AND PATENT/DT
L11 9 S L10 AND PRD<20010409
L12 19 S L9 NOT PATENT/DT
L13 17 S L12 AND PD<20010409
L14 26 S L11 OR L13
S 366451-20-9/REG#

*getting rid of bad dates
26 cites*

inventor's work

FILE 'REGISTRY' ENTERED AT 14:55:09 ON 28 AUG 2002
L15 1 S 366451-20-9/RN

FILE 'HCAPLUS' ENTERED AT 14:55:10 ON 28 AUG 2002
L16 1 S L15
S 366451-18-5/REG#

FILE 'REGISTRY' ENTERED AT 14:55:56 ON 28 AUG 2002
L17 1 S 366451-18-5/RN

FILE 'HCAPLUS' ENTERED AT 14:55:56 ON 28 AUG 2002
L18 1 S L17
L19 1 S L16 OR L18

FILE 'REGISTRY' ENTERED AT 14:58:07 ON 28 AUG 2002
L20 498 S L5 NOT L6
L21 4 S L20 AND N=2 AND CL=2 AND O=4
L22 2 S L21 AND "HYDROXYETHOXY"
L23 3 S L20 AND N=4 AND S=2 AND O=6
L24 1 S L23 AND C31 H41 N4 O6 S2/MF
L25 1 S L20 AND C=33 AND N=4 AND O=6 AND S=2

FILE 'HCAPLUS' ENTERED AT 15:06:02 ON 28 AUG 2002
L26 1 S L22 OR L24

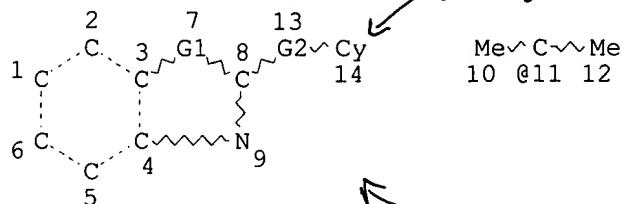
applicant's work

*searching
applicant's
specific cpds
- they are
found only in
inventor's
citation*

=> d que 120

L1

STR



VAR G1=O/S/11

REP G2=(2-9) C

NODE ATTRIBUTES:

CONNECT IS E3 RC AT 8

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

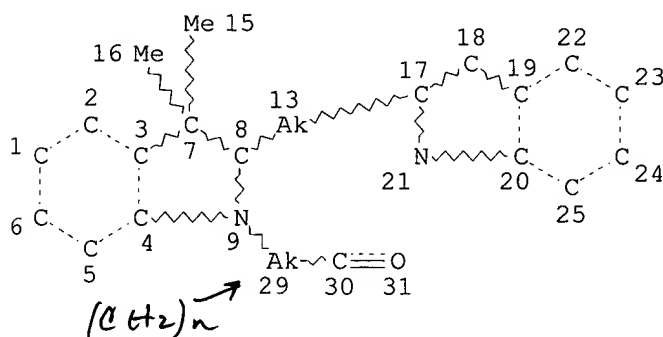
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L2 45490 SEA FILE=REGISTRY SSS FUL L1

L3 STR



NODE ATTRIBUTES:

CONNECT IS E3 RC AT 8

DEFAULT MLEVEL IS ATOM

GGCAT IS LIN UNS AT 13

GGCAT IS LIN SAT AT 29

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 24

STEREO ATTRIBUTES: NONE

L5 541 SEA FILE=REGISTRY SUB=L2 SSS FUL L3

L6 43 SEA FILE=REGISTRY ABB=ON PLU=ON L5 AND (NCNC2-NCNC3/ES OR NCNC3/ES)

L20 498 SEA FILE=REGISTRY ABB=ON PLU=ON L5 NOT L6

=> d ibib abs hitstr

L14 ANSWER 1 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:449855 HCAPLUS

DOCUMENT NUMBER: 137:30254

TITLE: Fluorescent labeling of protein C-terminal with puromycin analogs linked to fluorophores and high-throughput assay technologies for in vitro analysis of protein interactions

INVENTOR(S): Yanagawa, Hiroshi; Doi, Nobuhide; Miyamoto, Etsuko; Takashima, Hideaki; Oyama, Rieko

PATENT ASSIGNEE(S): Keio University, Japan

SOURCE: PCT Int. Appl., 95 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002046395	A1	20020613	WO 2001-JP10731	20011207 <--
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				

PRIORITY APPLN. INFO.: JP 2000-373105 A 20001207 <--

AB A method for modifying protein C-terminal with a reagent which contains an acceptor region having a group capable of binding to a protein through a transpeptidation reaction and a modifying region contg. a modifier linked to the acceptor region via a nucleotide linker, is disclosed. A template contg. an ORF encoding a protein, a 5'-untranslated region (UTR) contg. a promoter and an enhancer located in the 5'-side of the ORF and a 3'-terminal region contg. a PolyA sequence located in the 3'-side of the ORF is expressed to thereby synthesize a protein. The protein thus synthesized is then purified. The yield of the modified protein in the protein C-terminal modification method can be largely improved and protein interactions can be detected at an improved level in the method of detecting interactions among various mols. The authors developed and tested a simple method for fluorescence labeling and interaction anal. of proteins based on a highly efficient in vitro translation system combined with high-throughput technologies such as microarrays and fluorescence cross-correlation spectroscopy (FCCS). By use of puromycin analogs linked to various fluorophores through a deoxycytidylic acid linker, a single fluorophore can be efficiently incorporated into a protein at the carboxyl terminus during in vitro translation. The authors confirmed that the resulting fluorescently labeled proteins are useful for probing protein-protein and protein-DNA interactions by means of pulldown assay, DNA microarrays, and FCCS in model expts. These fluorescence assay systems can be easily extended to highly parallel anal. of protein interactions in studies of functional genomics. Interactions involving c-Fos, c-Jun, and DNA were studied by labeling with rhodamine green or Cy5 using puromycin-contg. modifying agents.

IT 436083-90-8 436083-91-9

RL: MOA (Modifier or additive use); RGT (Reagent); RACT (Reactant or reagent); USES (Uses)

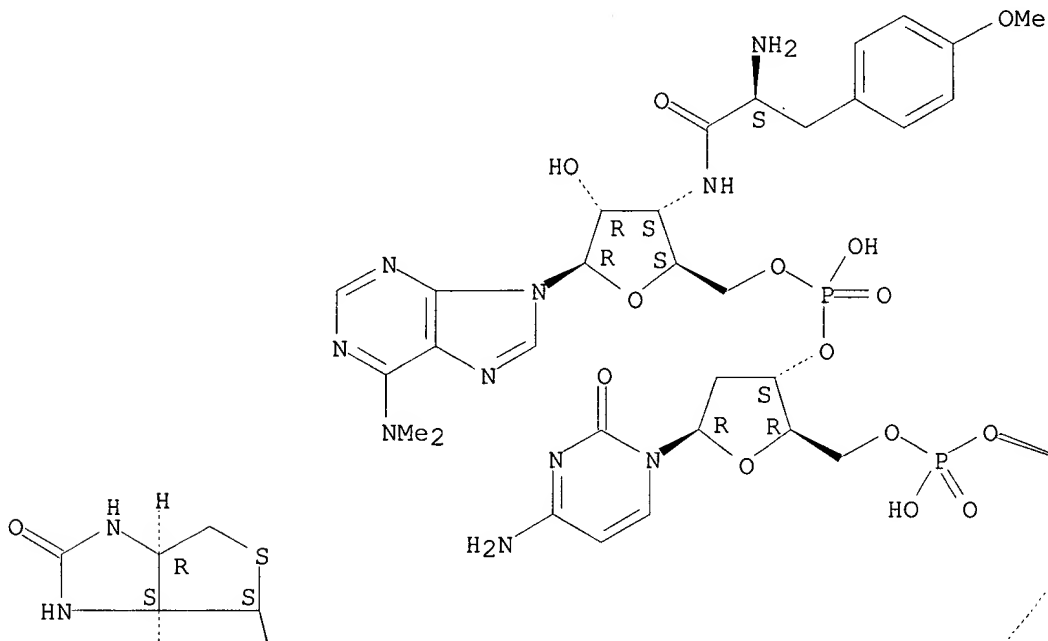
(fluorescence labeling of protein C-terminal with puromycin analogs linked to fluorophores and high-throughput assay technol. for in vitro anal. of protein interactions)

RN 436083-90-8 HCAPLUS

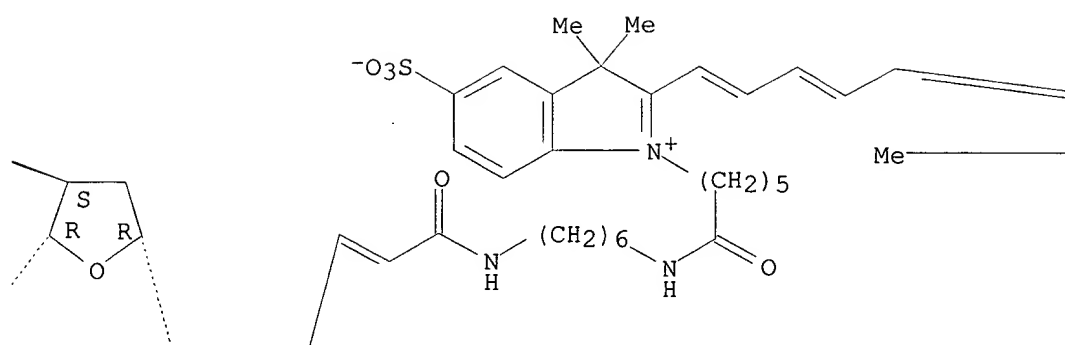
CN Adenosine, 2'-deoxy-5-[3-[[6-[[6-[2-[5-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]hexyl]amino]-3-oxo-1-propenyl]-5'-O-[21-[(3aS,4S,6aR)hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-hydroxy-1-oxido-10,17-dioxo-2-oxa-9,16-diaza-1-phosphaheneicos-1-yl]uridylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-3'-[[2S)-2-amino-3-(4-methoxyphenyl)-1-oxopropyl]amino]-3'-deoxy-N,N-dimethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

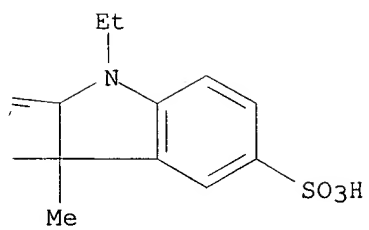
PAGE 1-A

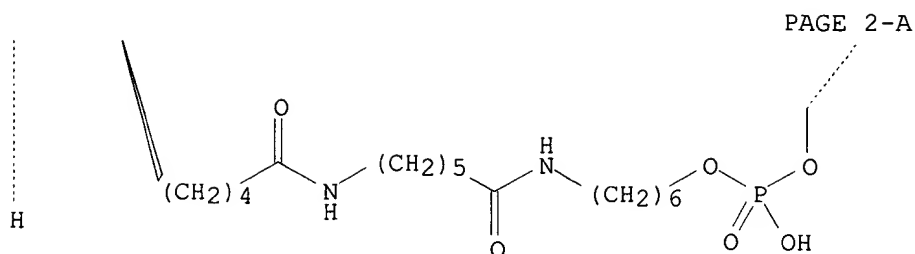


PAGE 1-B



PAGE 1-C



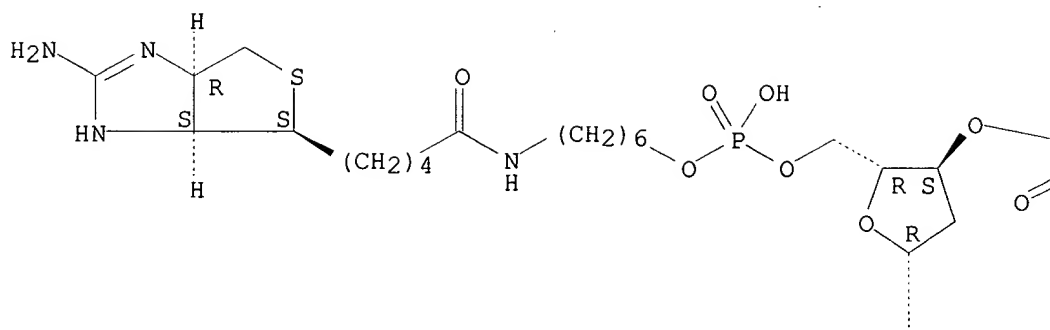


RN 436083-91-9 HCAPLUS
 CN Adenosine, 5'-O-[[[6-[[5-[(3aS,4S,6aR)-2-amino-3a,4,6,6a-tetrahydro-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]hexyl]oxy]hydroxyphosphinyl]-2'-deoxy-5-[3-[[6-[[6-[2-[5-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]hexyl]amino]-3-oxo-1-propenyl]uridylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-3'-[[[(2S)-2-amino-3-(4-methoxyphenyl)-1-oxopropyl]amino]-3'-deoxy-N,N-dimethyl-, inner salt (9CI) (CA INDEX NAME)

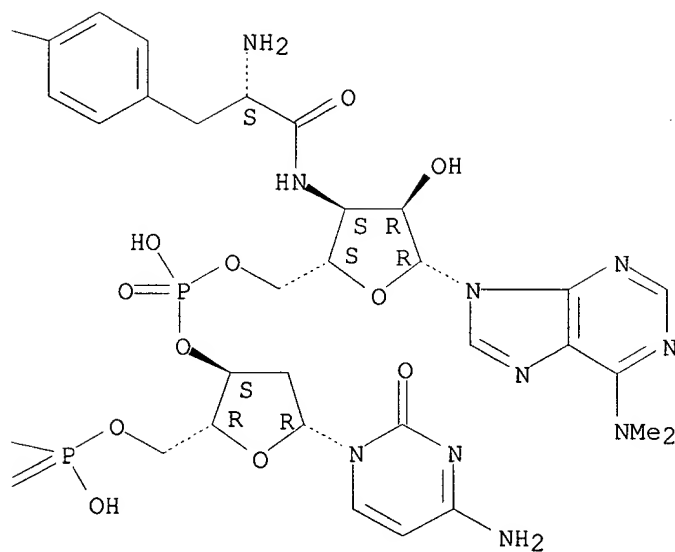
Absolute stereochemistry.
 Double bond geometry unknown.

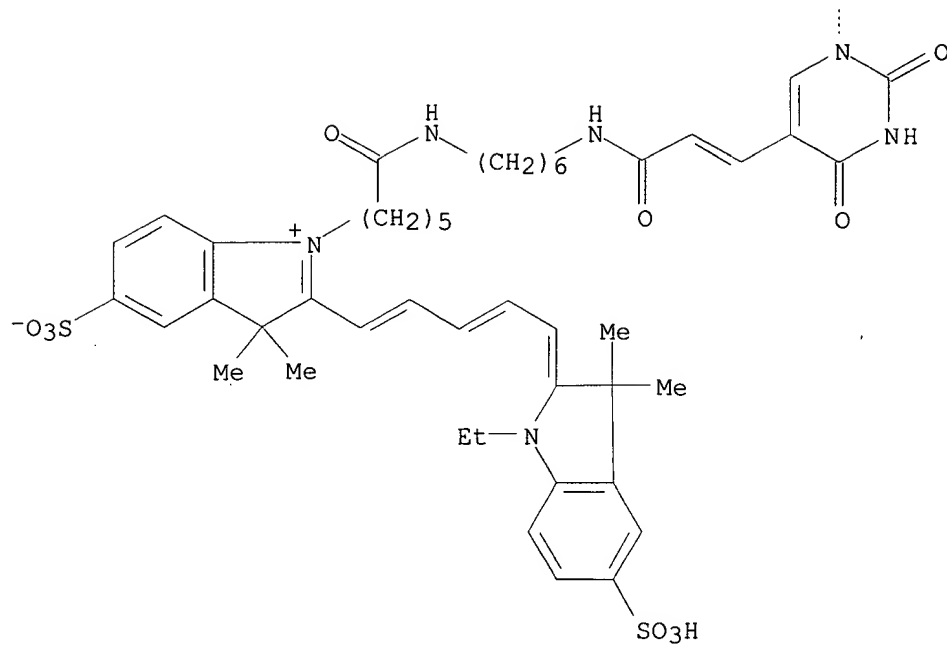
PAGE 1-A

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PAGE 1-B





REFERENCE COUNT:

12

THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 2

L14 ANSWER 2 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:405773 HCAPLUS

DOCUMENT NUMBER: 136:403155

TITLE: Monofunctional indocyanine labeling reagents and improved method for their production

INVENTOR(S): Caputo, Giuseppe; Della, Ciana Leopoldo

PATENT ASSIGNEE(S): Innosense S.R.L., Italy

SOURCE: Eur. Pat. Appl., 25 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1209205	A1	20020529	EP 2000-126019	20001128
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
EP 1211294	A1	20020605	EP 2001-127884	20011123 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2002065421	A1	20020530	US 2001-995350	20011127 <--
AU 2001093440	A5	20020606	AU 2001-93440	20011127 <--
PRIORITY APPLN. INFO.:			EP 2000-126019	A 20001128 <--

OTHER SOURCE(S): CASREACT 136:403155; MARPAT 136:403155

AB A process for prepg. an asym. indocyanine dye is characterized in that it comprises the steps of (a) reacting a first quaternized indolenine or substituted indolenine with RN:CH(CH:CX)nNHR or hydrochloride thereof (n = 0, 1 R = Ph or substituted Ph, X H, halogen or alkyl, preferably Cl) in a solvent selected from the group consisting of acetic acid, acetic anhydride and mixts. thereof in the presence of acetyl chloride, to obtain an intermediate hemicyanine; and (b) further reacting this intermediate hemicyanine with a second quaternized indolenine or substituted indolenine different from the first indolenine. The process is characterized by high yields, readily obtained starting materials, and facile workup. The products are suitable as fluorescent labels emitting in the IR and near-IR region which can be excited by means of simple light-emitting or laser diodes and have high extinction coeffs. Thus, a hemicyanine was prepd. from 1-ethyl-2,3,3-trimethylindolenium iodide, malonaldehyde dianil, and acetyl chloride; this product was then treated with 1-(3-acetoxypentyl)-2,3,3-trimethylindolenium iodide and then with 2-cyanoethyl tetraisopropylphosphorodiamidite to provide a fluorescent labeling dye.

IT 431943-84-9P 431943-86-1P

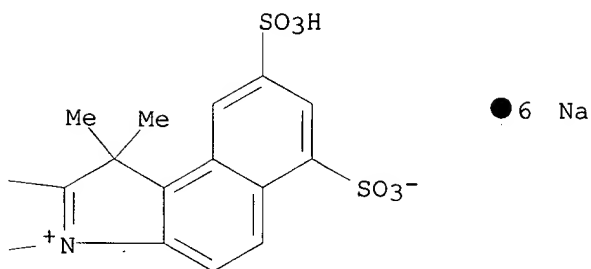
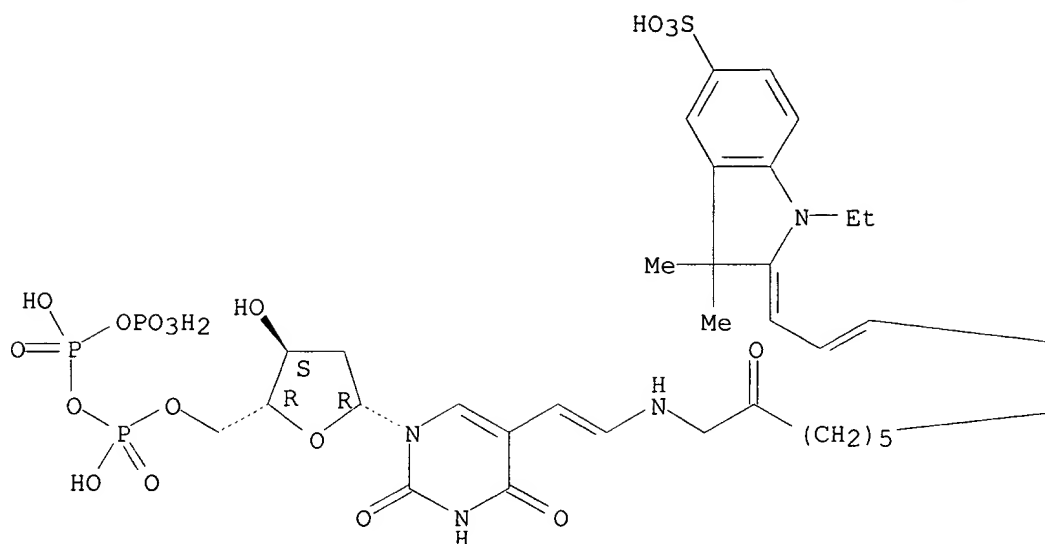
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; prodn. of monofunctional indocyanine fluorescent labeling dyes)

RN 431943-84-9 HCAPLUS

CN 1H-Benz[e]indolium, 3-[6-[[3-[1-[2-deoxy-5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-erythro-pentofuranosyl]-1,2,3,4-tetrahydro-2,4-dioxo-5-pyrimidinyl]-2-propenyl]amino]-6-oxohexyl]-2-[3-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1-propenyl]-1,1-dimethyl-6,8-disulfo-, inner salt, hexasodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

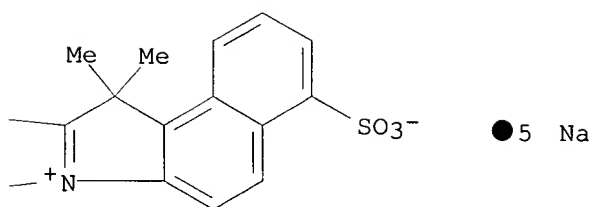
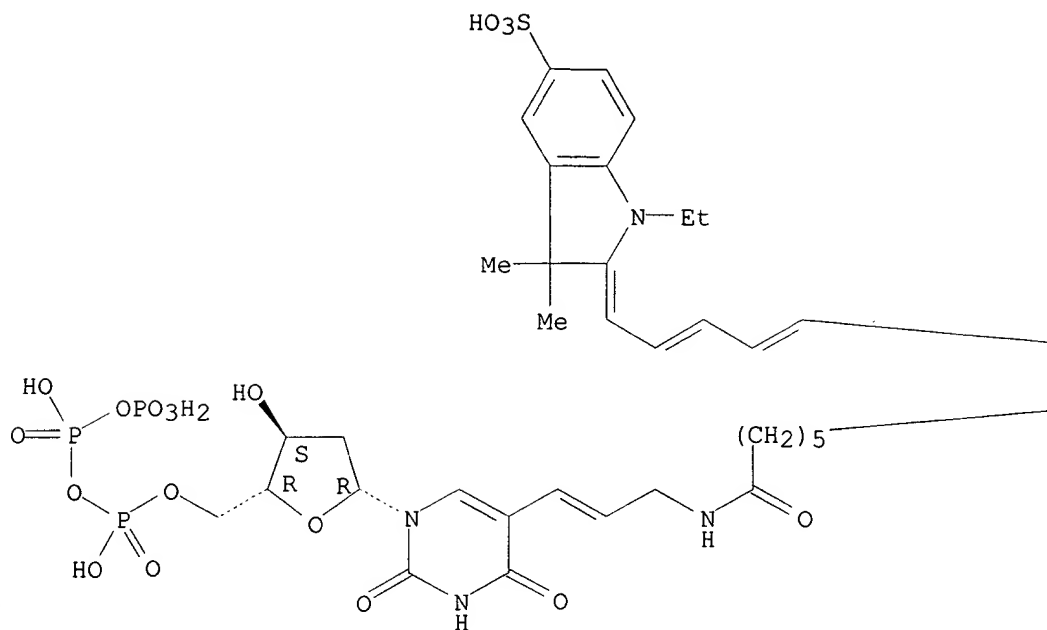
Double bond geometry unknown.



RN 431943-86-1 HCAPLUS

CN 1H-Benz[e]indolium, 3-[6-[[3-[1-[2-deoxy-5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-erythro-pentofuranosyl]-1,2,3,4-tetrahydro-2,4-dioxo-5-pyrimidinyl]-2-propenyl]amino]-6-oxohexyl]-2-[5-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1,3-pentadienyl]-1,1-dimethyl-6-sulfo-, inner salt, pentasodium salt (9CI)
(CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 3

L14 ANSWER 3 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:730822 HCAPLUS

DOCUMENT NUMBER: 135:283541

TITLE: A novel polypeptide-protein 11 of growth hormone-family and a polynucleotide sequence encoding the same

INVENTOR(S): Mao, Yumin; Xie, Yi

PATENT ASSIGNEE(S): Shanghai Biowindow Gene Development Inc., Peop. Rep. China

SOURCE: PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001072832	A1	20011004	WO 2001-CN489	20010326 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CN 1315391	A	20011003	CN 2000-115180	20000327

PRIORITY APPLN. INFO.: CN 2000-115180 A 20000327 <--

AB The present invention discloses a novel polypeptide-protein 11 of growth hormone-family and a polynucleotide encoding the same, as well as a method of producing the polypeptide by DNA recombinant technique. The present invention also discloses methods of using the polypeptide in treatment of various diseases, such as malignant tumor, blood disease, HIV infection, immunol. disease, various inflammations and so on. The present invention also discloses an antagonist against the polypeptide and the therapeutic use of the same. Also disclosed is the use of such novel polynucleotide encoding protein 11 of growth hormone-family.

IT 158613-48-0, Cy3-dUTP 158613-49-1, Cy5-dUTP

RL: ARU (Analytical role, unclassified); THU (Therapeutic use); ANST

(Analytical study); BIOL (Biological study); USES (Uses)

(label; protein 11 of growth hormone-family, analogs, antagonists, promoters, inhibitors, encoding polynucleotides, and antibodies for diagnosis and treatment of cancer, blood disease, HIV, immunol. disease and inflammation)

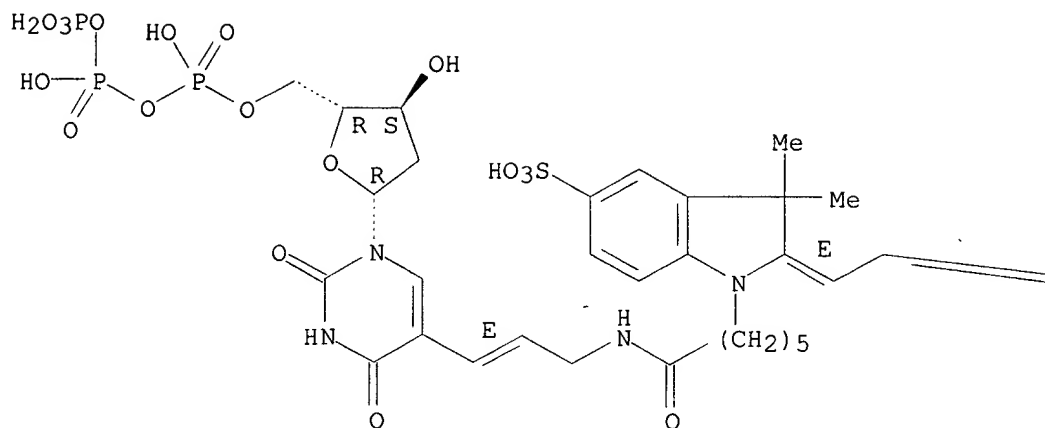
RN 158613-48-0 HCAPLUS

CN Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-5-[(1E)-3-[[6-[(2E)-2-[(2E)-3-(3,3-dimethyl-5-sulfo-3H-indol-2-yl)-2-propenylidene]-2,3-dihydro-3,3-dimethyl-5-sulfo-1H-indol-1-yl]-1-oxohexyl]amino]-1-propenyl]- (9CI) (CA INDEX NAME)

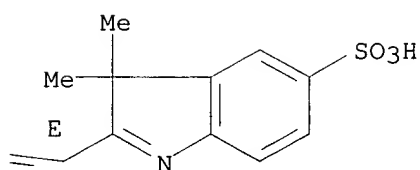
Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

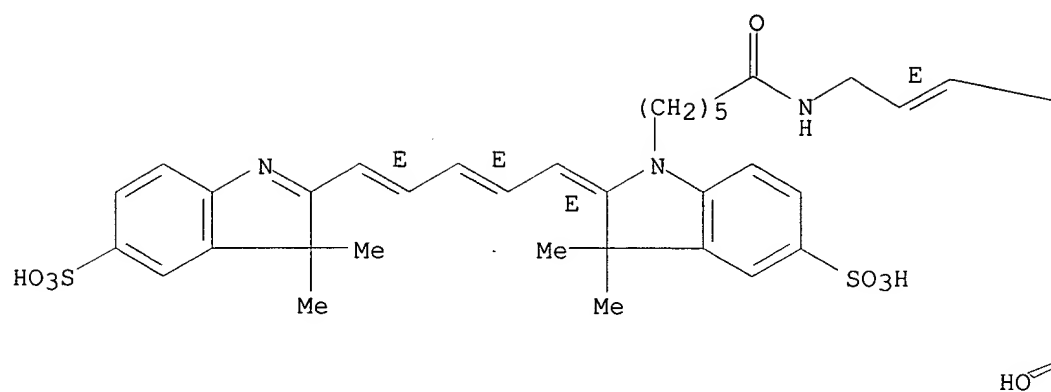


RN 158613-49-1 HCAPLUS

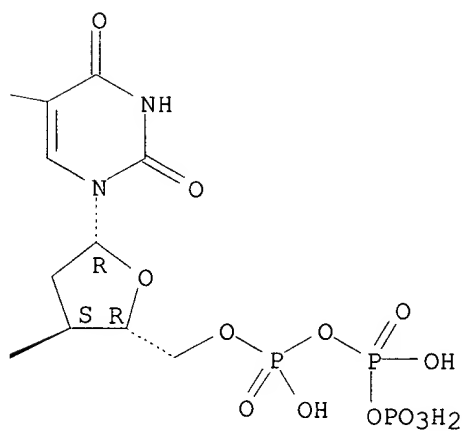
CN Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-5-[(1E)-3-[[6-[(2E)-2-
[(2E,4E)-5-(3,3-dimethyl-5-sulfo-3H-indol-2-yl)-2,4-pentadienylidene]-2,3-
dihydro-3,3-dimethyl-5-sulfo-1H-indol-1-yl]-1-oxohexyl]amino]-1-propenyl]-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT:

4

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 4

L14 ANSWER 4 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:713386 HCAPLUS

DOCUMENT NUMBER: 135:271898

TITLE: A novel polypeptide-human CDC4 analogous protein and the polynucleotide encoding said polypeptide and antagonistic antibody

INVENTOR(S): Mao, Yumin; Xie, Yi

PATENT ASSIGNEE(S): Biowindow Gene Development Inc., Peop. Rep. China

SOURCE: PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001070779	A1	20010927	WO 2001-CN157	20010226 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG CN 1312284 A 20010912 CN 2000-111935 20000307				

PRIORITY APPLN. INFO.: CN 2000-111935 A 20000307 <--

AB The invention discloses a new kind of polypeptide-human CDC4 analogous protein 12 and the polynucleotide encoding said polypeptide and a process for producing the polypeptide by recombinant methods. It also discloses the method of applying the polypeptide for the treatment of various kinds of diseases, such as cancer, hemopathy, HIV infection, immune diseases and inflammation. The antagonist of the polypeptide and therapeutic use of the same is also disclosed. In addn., it refers to the use of polynucleotide encoding said human CDC4 analogous protein 12.

IT 158613-48-0 158613-49-1

RL: ARU (Analytical role, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (label; human CDC4 analogous protein, encoding polynucleotide, antibody, and antagonist for diagnostic and therapeutic uses)

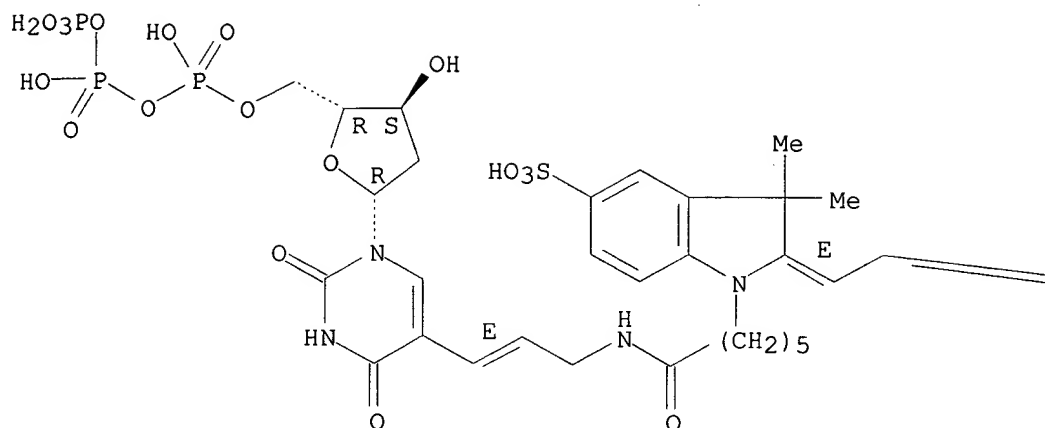
RN 158613-48-0 HCAPLUS

CN Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-5-[(1E)-3-[[6-[(2E)-2-[(2E)-3-(3,3-dimethyl-5-sulfo-3H-indol-2-yl)-2-propenylidene]-2,3-dihydro-3,3-dimethyl-5-sulfo-1H-indol-1-yl]-1-oxohexyl]amino]-1-propenyl]- (9CI) (CA INDEX NAME)

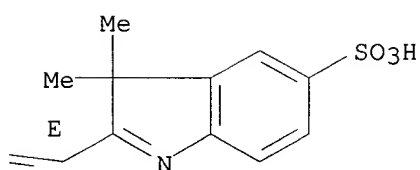
Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

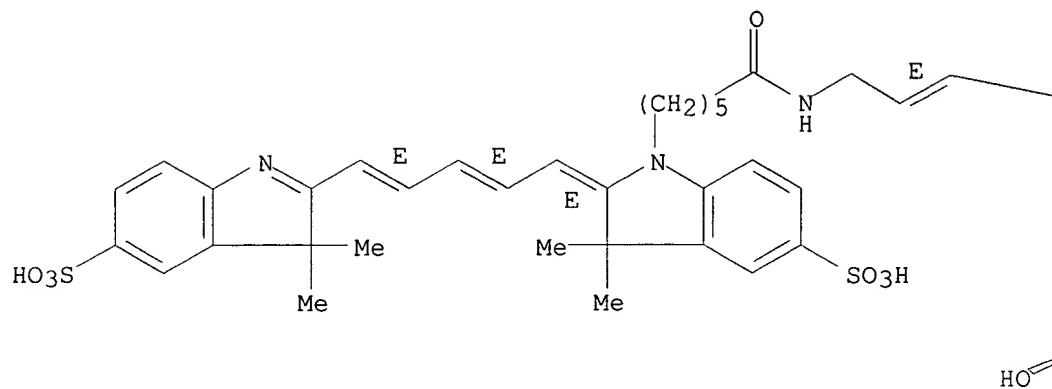


RN 158613-49-1 HCAPLUS

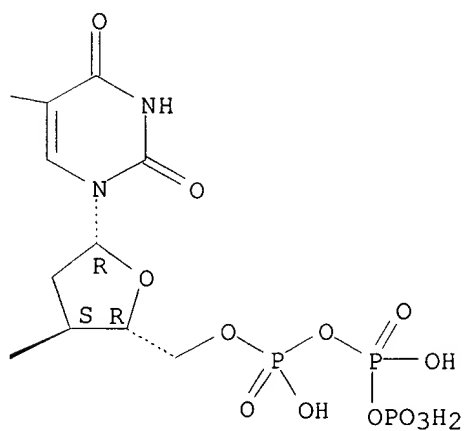
CN Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-5-[(1E)-3-[[6-[(2E)-2-[(2E,4E)-5-(3,3-dimethyl-5-sulfo-3H-indol-2-yl)-2,4-pentadienylydene]-2,3-dihydro-3,3-dimethyl-5-sulfo-1H-indol-1-yl]-1-oxohexyl]amino]-1-propenyl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT:

3

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 4

L14 ANSWER 4 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:713386 HCAPLUS

DOCUMENT NUMBER: 135:271898

TITLE: A novel polypeptide-human CDC4 analogous protein and the polynucleotide encoding said polypeptide and antagonistic antibody

INVENTOR(S): Mao, Yumin; Xie, Yi

PATENT ASSIGNEE(S): Biowindow Gene Development Inc., Peop. Rep. China

SOURCE: PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001070779	A1	20010927	WO 2001-CN157	20010226 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CN 1312284	A	20010912	CN 2000-111935	20000307

PRIORITY APPLN. INFO.: CN 2000-111935 A 20000307 <--

AB The invention discloses a new kind of polypeptide-human CDC4 analogous protein 12 and the polynucleotide encoding said polypeptide and a process for producing the polypeptide by recombinant methods. It also discloses the method of applying the polypeptide for the treatment of various kinds of diseases, such as cancer, hemopathy, HIV infection, immune diseases and inflammation. The antagonist of the polypeptide and therapeutic use of the same is also disclosed. In addn., it refers to the use of polynucleotide encoding said human CDC4 analogous protein 12.

IT 158613-48-0 158613-49-1

RL: ARU (Analytical role, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(label; human CDC4 analogous protein, encoding polynucleotide, antibody, and antagonist for diagnostic and therapeutic uses)

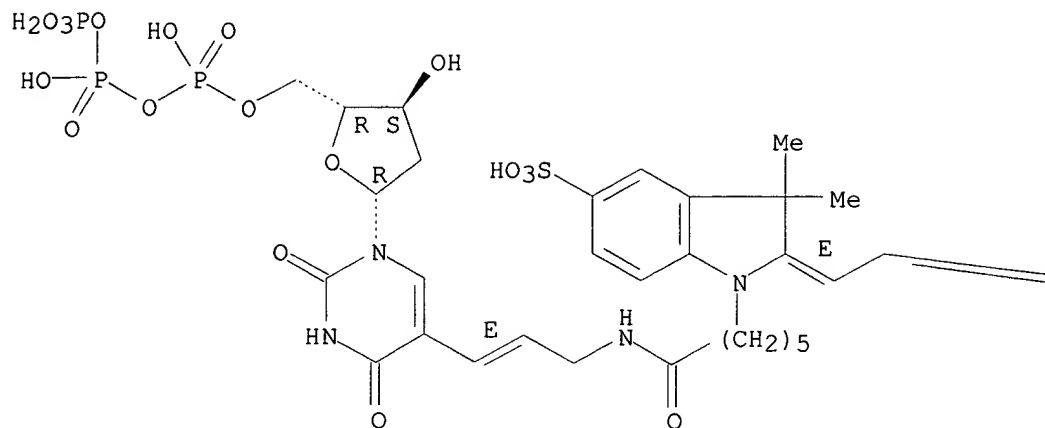
RN 158613-48-0 HCAPLUS

CN Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-5-[(1E)-3-[[6-[(2E)-2-[(2E)-3-(3,3-dimethyl-5-sulfo-3H-indol-2-yl)-2-propenylidene]-2,3-dihydro-3,3-dimethyl-5-sulfo-1H-indol-1-yl]-1-oxohexyl]amino]-1-propenyl]- (9CI) (CA INDEX NAME)

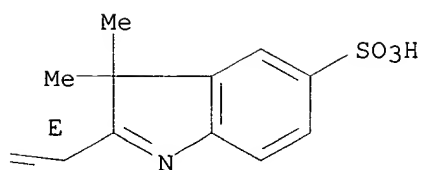
Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

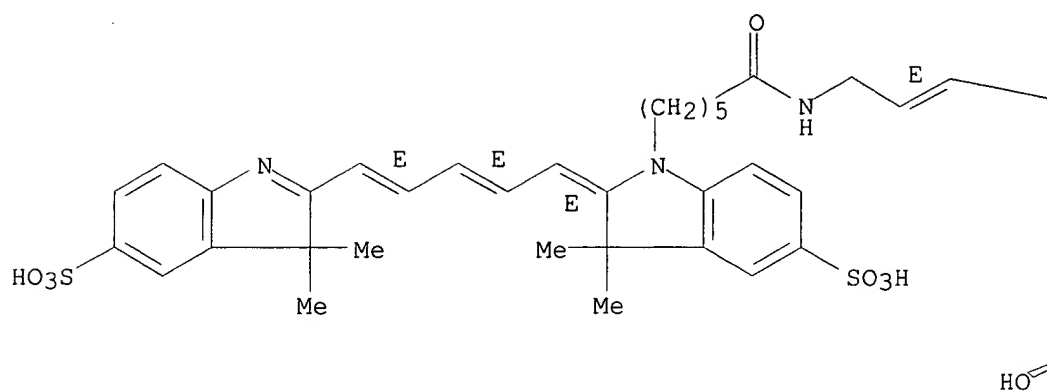


RN 158613-49-1 HCAPLUS

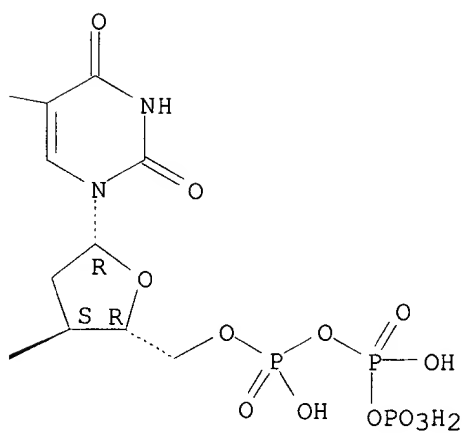
CN Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-5-[(1E)-3-[[6-[(2E)-2-[(2E,4E)-5-(3,3-dimethyl-5-sulfo-3H-indol-2-yl)-2,4-pentadienylydene]-2,3-dihydro-3,3-dimethyl-5-sulfo-1H-indol-1-yl]-1-oxohexyl]amino]-1-propenyl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT:

3

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 5

L14 ANSWER 5 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:575379 HCAPLUS

DOCUMENT NUMBER: 135:341009

TITLE: Rapid functional analysis of protein-protein interactions by fluorescent C-terminal labeling and single-molecule imaging

AUTHOR(S): Yamaguchi, J.; Nemoto, N.; Sasaki, T.; Tokumasu, A.; Mimori-Kiyosue, Y.; Yagi, T.; Funatsu, T.

CORPORATE SOURCE: Department of Physics, School of Science and Engineering, Waseda University, Shinjuku-ku, Tokyo, 169-8555, Japan

SOURCE: FEBS Letters (2001), 502(3), 79-83

CODEN: FEBLAL; ISSN: 0014-5793

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Detection of protein-protein interactions is a fundamental step to understanding gene function. Here we report a sensitive and rapid method for assaying protein-protein interactions at the single-mol. level. Protein mols. were synthesized in a cell-free translation system in the presence of Cy5-puro, a fluorescent puromycin, using mRNA without a stop codon. The interaction of proteins thus prep'd. was visualized using a single-mol. imaging technique. As a demonstration of this method, a motor protein, kinesin, was labeled with Cy5-puro at an efficiency of about 90%, and the processive movement of kinesin along microtubules was obs'd. by using total internal reflection microscopy. It took only 2 h from the synthesis of proteins to the functional anal. This method is applicable to the functional anal. of various kinds of proteins.

IT 370884-42-7P

RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)

(protein-protein interactions by fluorescent C-terminal labeling and single-mol. imaging)

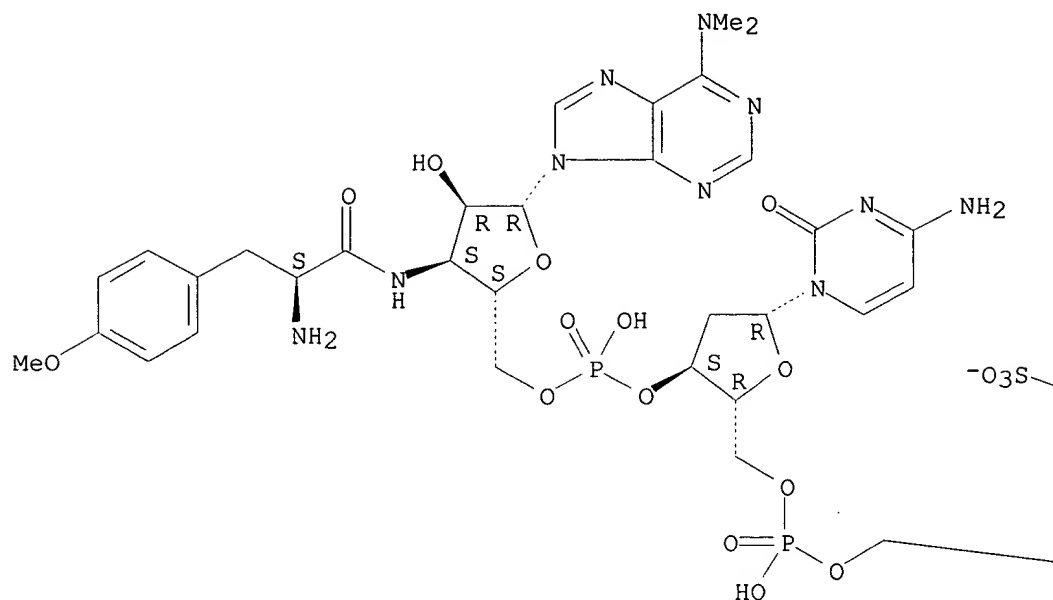
RN 370884-42-7 HCAPLUS

CN Adenosine, 2'-deoxy-5'-O-[[2-[2-[[6-[2-[6-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-2,4-hexadienyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]ethoxy]ethoxy]hydroxyphosphinyl]cytidyl- (3'.fwdarw.5')-3'-[[(2S)-2-amino-3-(4-methoxyphenyl)-1-oxopropyl]amino]-3'-deoxy-N,N-dimethyl-, inner salt (9CI) (CA INDEX NAME)

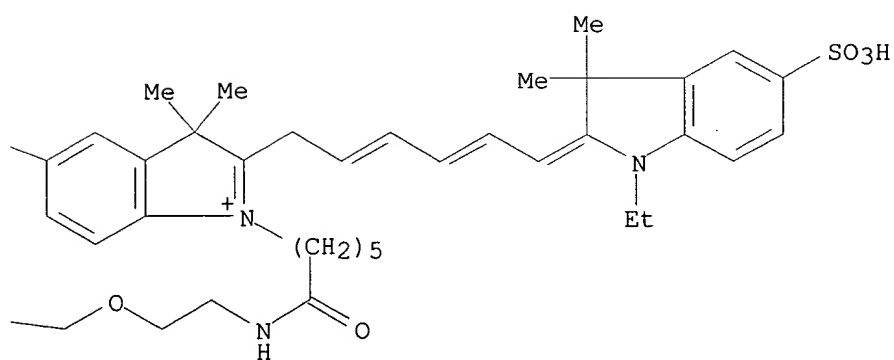
Absolute stereochemistry.

Double bond geometry unknown.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT:

23

THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 6

L14 ANSWER 6 OF 26 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2001:507799 HCAPLUS
 DOCUMENT NUMBER: 135:93921
 TITLE: Mobility-modifying cyanine dyes
 INVENTOR(S): Menchen, Steven M.; Benson, Scott C.; Rosenblum, Barnett B.; Khan, Shaheer H.
 PATENT ASSIGNEE(S): PE Corporation, USA
 SOURCE: PCT Int. Appl., 133 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001049790	A2	20010712	WO 2001-US152	20010103 <--
WO 2001049790	A3	20011206		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-477270 A 20000104 <--

OTHER SOURCE(S): MARPAT 135:93921

AB The present invention provides a novel class of fluorescent cyanine dye compds. that are modified at one of the heterocyclic ring nitrogen atoms with a mobility-modifying moiety that permits the electrophoretic mobilities of polynucleotides labeled with the mobility-modifying cyanine dyes to be adjusted or tuned in a predictable fashion while retaining enzymic activity. The ability to predictably tune the relative electrophoretic mobilities of the dyes permits the creation of sets of mobility-matched fluorescent dyes of a variety of structures for a variety of applications, including fluorescence-based 4-color nucleic acid sequencing reactions.

IT 349491-76-5P 349491-78-7P

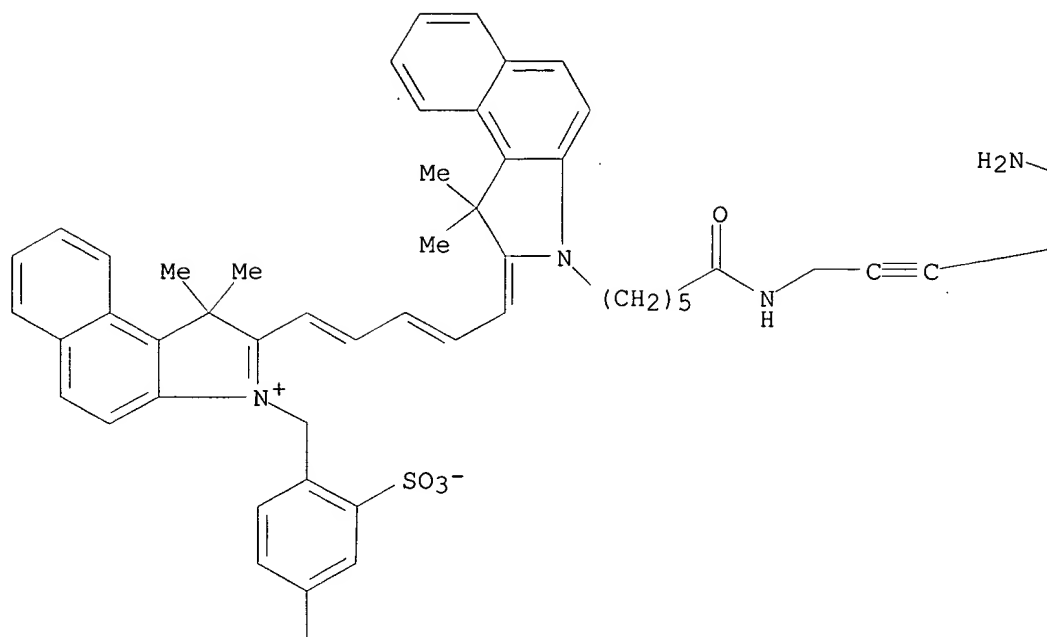
RL: ARG (Analytical reagent use); IMF (Industrial manufacture); TEM (Technical or engineered material use); ANST (Analytical study); PREP (Preparation); USES (Uses)
 (mobility-modifying fluorescent cyanine dyes for nucleic acid sequencing reactions)

RN 349491-76-5 HCAPLUS

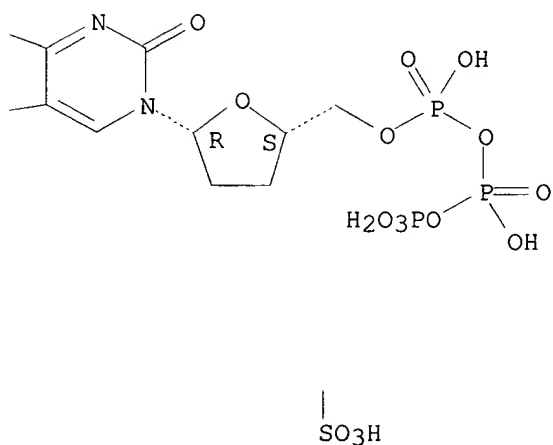
CN 1H-Benz[e]indolium, 2-[5-[3-[6-[[3-[4-amino-1,2-dihydro-2-oxo-1-[(2R,5S)-tetrahydro-5-(3,5,7,7-tetrahydroxy-3,5,7-trioxido-2,4,6-trioxa-3,5,7-triphosphahept-1-yl)-2-furanyl]-5-pyrimidinyl]-2-propynyl]amino]-6-oxohexyl]-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene]-1,3-pentadienyl]-3-[(2,4-disulfophenyl)methyl]-1,1-dimethyl-, inner salt (9CI)
 (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.

PAGE 1-A



PAGE 1-B



PAGE 2-A

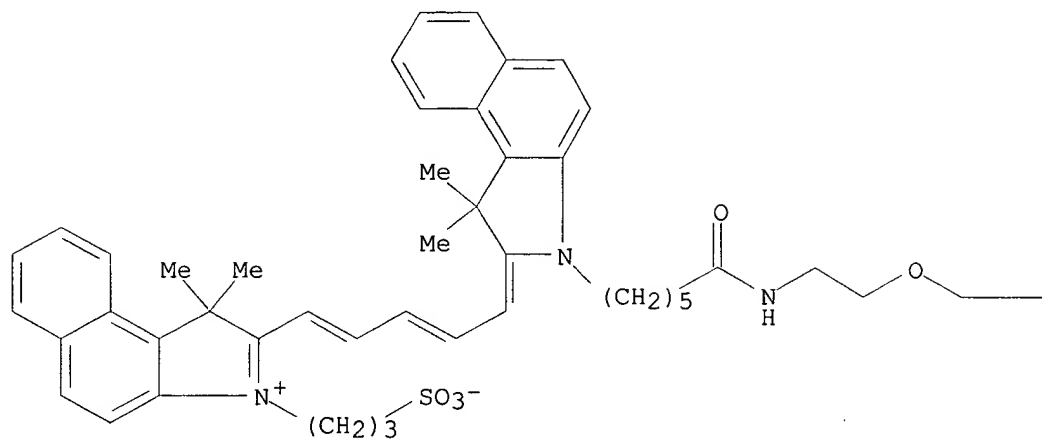


RN 349491-78-7 HCAPLUS
 CN 1H-Benz[e]indolium, 2-[5-[1,3-dihydro-1,1-dimethyl-3-[6-oxo-6-[[2-[[3-[1,2,3,4-tetrahydro-2,4-dioxo-1-[(2R,5S)-tetrahydro-5-(3,5,7,7-tetrahydroxy-3,5,7-trioxido-2,4,6-trioxa-3,5,7-triphasphahept-1-yl)-2-furanyl]-5-pyrimidinyl]-2-propynyl]oxy]ethyl]amino]hexyl]-2H-benz[e]indol-2-ylidene]-1,3-pentadienyl]-1,1-dimethyl-3-(3-sulfopropyl)-, inner salt

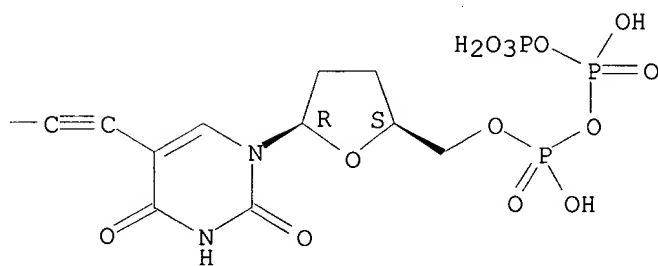
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



PAGE 1-B



=> d ibib abs hitstr 7

L14 ANSWER 7 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:295103 HCAPLUS

DOCUMENT NUMBER: 136:1249

TITLE: Detection of mitochondrial single nucleotide polymorphisms using a primer elongation reaction on oligonucleotide microarrays

AUTHOR(S): Erdogan, Fikret; Kirchner, Roland; Mann, Wolfgang; Ropers, Hans-Hilger; Nuber, Ulrike A.

CORPORATE SOURCE: Max-Planck Institute for Molecular Genetics, Berlin, 14195, Germany

SOURCE: Nucleic Acids Research (2001), 29(7), e36/1-e36/7

CODEN: NARHAD; ISSN: 0305-1048

PUBLISHER: Oxford University Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors have developed a novel allele-specific primer elongation protocol using a DNA polymerase on oligonucleotide chips. Oligonucleotide primers carrying polymorphic sites at their free 3' end were covalently bound to glass slides. The generation of single-stranded targets of genomic DNA contg. single nucleotide polymorphisms (SNPs) to be typed was achieved by an asym. PCR reaction or exonuclease treatment of phosphothioate (PTO)-modified PCR products. In the presence of DNA polymerase and all four dNTPs, with Cy3-dUTP replacing dTTP, allele-specific extension of the immobilized primers took place along a stretch of target DNA sequence. The yield of elongated products was increased by repeated reaction cycles. The authors performed multiplexed assays with many small DNA targets, or used single targets of up to 4.4 kb mitochondrial DNA (mtDNA) sequence to detect multiple SNPs in one reaction. The latter approach greatly simplifies preamplification of SNP-contg. regions, thereby providing a framework for typing hundreds of mtDNA polymorphisms.

IT 158613-48-0, Cy3-dUTP

RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(detection of mitochondrial single nucleotide polymorphisms using allele-specific elongation of immobilized oligonucleotide primers)

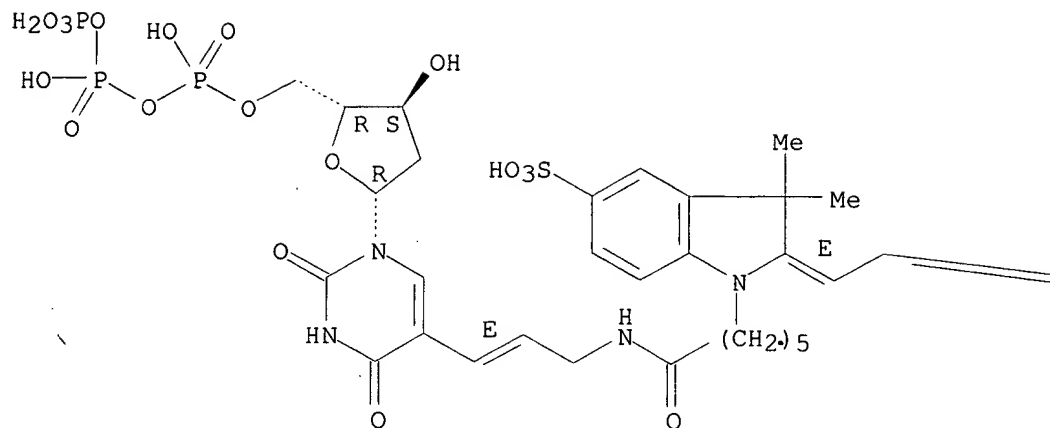
RN 158613-48-0 HCAPLUS

CN Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-5-[(1E)-3-[[6-[(2E)-2-[(2E)-3-(3,3-dimethyl-5-sulfo-3H-indol-2-yl)-2-propenylidene]-2,3-dihydro-3,3-dimethyl-5-sulfo-1H-indol-1-yl]-1-oxohexyl]amino]-1-propenyl]- (9CI) (CA INDEX NAME)

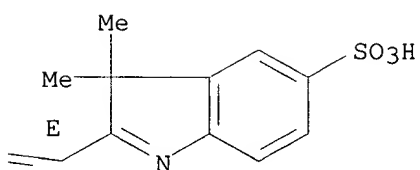
Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT:

30

THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 8

L14 ANSWER 8 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:182053 HCAPLUS

DOCUMENT NUMBER: 135:339932

TITLE: Progress towards single-molecule sequencing: enzymatic synthesis of nucleotide-specifically labeled DNA

AUTHOR(S): Augustin, M. A.; Ankenbauer, W.; Angerer, B.

CORPORATE SOURCE: Institut fur Biophysik und Physikalische Biochemie, Universitat Regensburg, Regensburg, D-93051, Germany

SOURCE: Journal of Biotechnology (2001), 86(3), 289-301

CODEN: JBITD4; ISSN: 0168-1656

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The enzymic incorporation of modified dNTPs into a growing DNA strand has intensively been studied. Modifications were detectable reporter groups such as digoxigenin or biotin, fluorochromes or aliph. side chains covalently attached to the base. Incorporation efficiencies were detd. with several DNA polymerases using linear primer-extension reactions followed by denaturing PAGE as a high-resoln. detection system. The authors describe the enzymic synthesis of DNA consisting of modified nucleotides exclusively. A defined template-primer system allows us to trace incorporation: (1) in up to 18 neighboring positions for several dUTP-derivs.; or (2) in stretches of DNA of up to 40 bases in length with complete substitution of all four natural dNTPs by differently modified counterparts. Synthesized DNA mols. are shown to particularly exhibit dramatically altered physico-chem. properties by contrast with native DNA. These results provide a fundamental data set for probe generation in single-mol. DNA sequencing (SMS).

IT 306274-02-2 306274-03-3 371920-27-3

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses) (enzymic synthesis of nucleotide-specifically labeled DNA in relation to single-mol. sequencing)

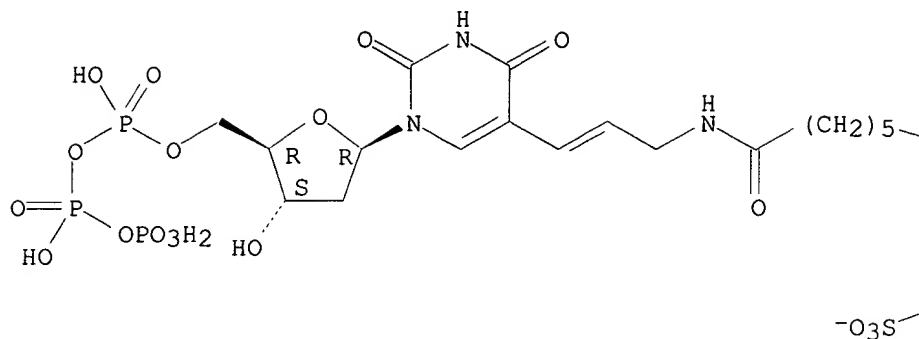
RN 306274-02-2 HCAPLUS

CN Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-5-[3-[[6-[[6-[2-[5-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]-1-oxohexyl]amino]-1-propenyl]-, inner salt (9CI) (CA INDEX NAME)

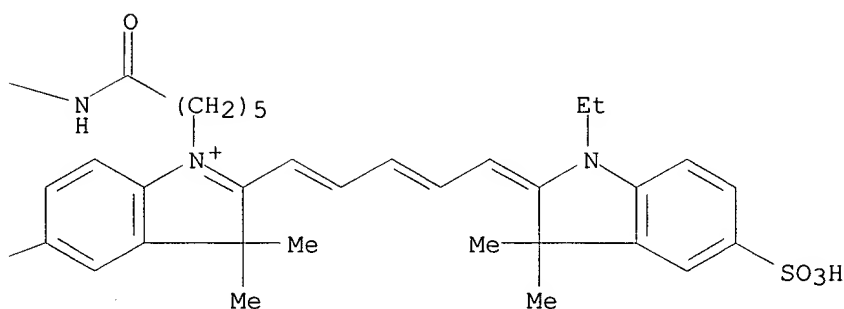
Absolute stereochemistry.

Double bond geometry unknown.

PAGE 1-A



PAGE 1-B

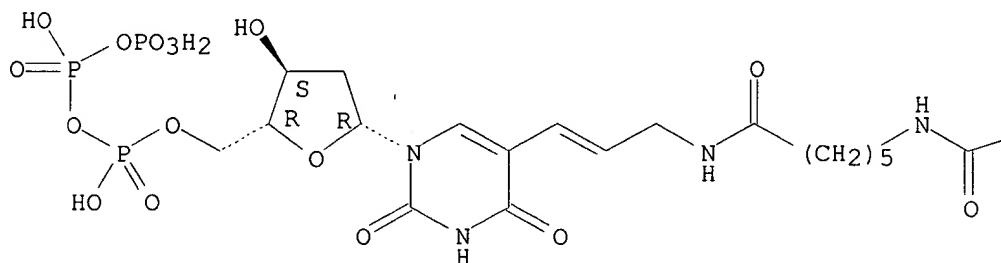


RN 306274-03-3 HCAPLUS

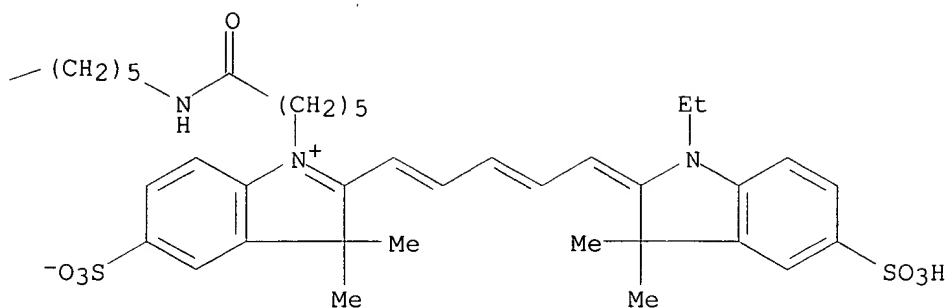
CN Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-5-[3-[[[6-[[[6-[[[6-[2-[5-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]-1-oxohexyl]amino]-1-oxohexyl]amino]-1-propenyl]-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



PAGE 1-B

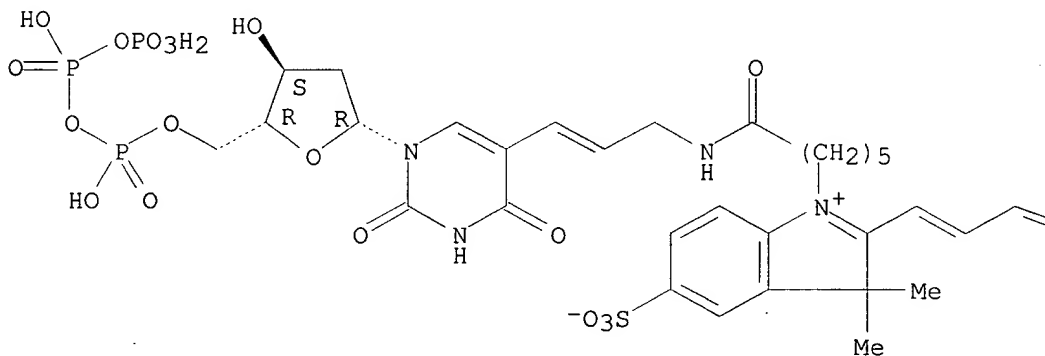


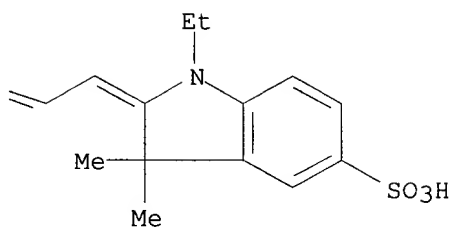
RN 371920-27-3 HCAPLUS

CN 3H-Indolium, 1-[6-[[3-[1-[2-deoxy-5-O-[hydroxy[[hydroxy(phosphonooxy)phosphoryl]oxy]phosphinyl]-.beta.-D-erythro-pentofuranosyl]-1,2,3,4-tetrahydro-2,4-dioxo-5-pyrimidinyl]-2-propenyl]amino]-6-oxohexyl]-2-[5-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A





REFERENCE COUNT:

12

THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 9

L14 ANSWER 9 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:135278 HCAPLUS

DOCUMENT NUMBER: 135:207645

TITLE: Two-color fluorescence labeling of early and mid-to-late replicating chromatin in living cells

AUTHOR(S): Schermelleh, Lothar; Solovei, Irina; Zink, Daniele; Cremer, Thomas

CORPORATE SOURCE: Ludwig Maximilians University, Munich, Germany

SOURCE: Chromosome Research (2001), 9(1); 77-80

CODEN: CRRSEE; ISSN: 0967-3849

PUBLISHER: Kluwer Academic Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors report a modified scratch-loading protocol called scratch replication labeling (SRL) for labeling chromatin in adherently growing cells. The protocol involves making scratches with a hypodermic needle tip through cells grown to subconfluency on glass coverslips. At the time of scratching, the cells are pulse-labeled in culture medium contg. Cy3-dUTP and Cy5-dUTP or Cy5-dUTP and FITC-dUTP. More efficient labeling was obtained by synchronizing the cells at the G1/S transition. Labeled cells continued to undergo mitosis and sequential labeling allowed visualization of early and mid-to-late replicating chromatin. The SRL protocol was used to label SH-EP N14 neuroblastoma cells, HeLa cells, BHK cells and primary human fibroblasts.

IT 158613-48-0, Cy3-dUTP 158613-49-1, Cy5-dUTP

RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)

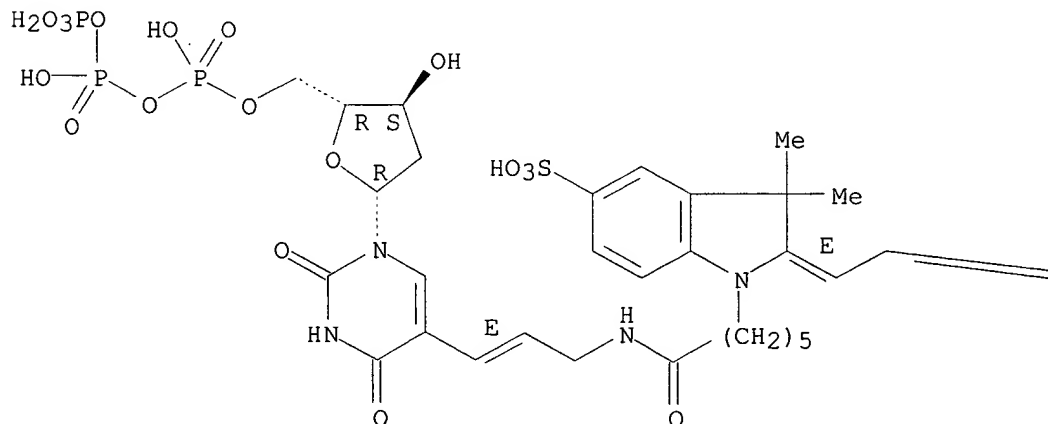
(two-color fluorescence labeling of early and mid-to-late replicating chromatin in living cells)

RN 158613-48-0 HCAPLUS

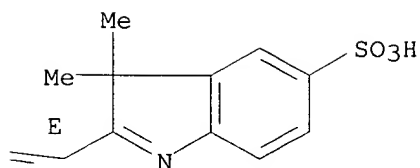
CN Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-5-[(1E)-3-[[6-[(2E)-2-[(2E)-3-(3,3-dimethyl-5-sulfo-3H-indol-2-yl)-2-propenylidene]-2,3-dihydro-3,3-dimethyl-5-sulfo-1H-indol-1-yl]-1-oxohexyl]amino]-1-propenyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

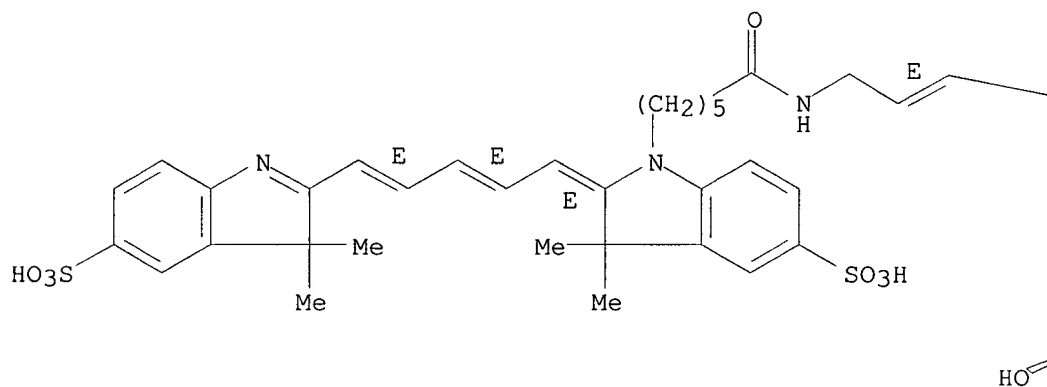


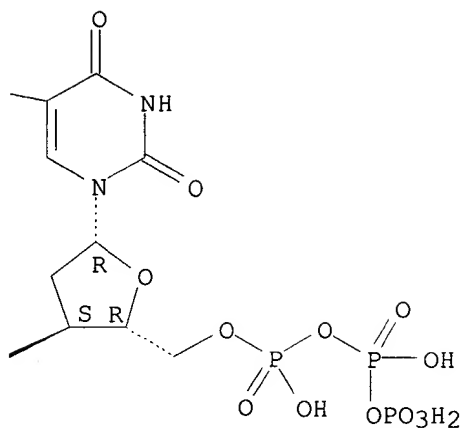
RN 158613-49-1 HCAPLUS

CN Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-5-[(1E)-3-[[6-[(2E)-2-[(2E,4E)-5-(3,3-dimethyl-5-sulfo-3H-indol-2-yl)-2,4-pentadienylidene]-2,3-dihydro-3,3-dimethyl-5-sulfo-1H-indol-1-yl]-1-oxohexyl]amino]-1-propenyl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A





REFERENCE COUNT:

18

THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 10

L14 ANSWER 10 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:38157 HCAPLUS

DOCUMENT NUMBER: 134:302397

TITLE: A comparison of optical geometries for combined flash photolysis and total internal reflection fluorescence microscopy

AUTHOR(S): Conibear, P. B.; Bagshaw, C. R.

CORPORATE SOURCE: Department of Biochemistry, University of Leicester, Leicester, LE1 7RH, UK

SOURCE: Journal of Microscopy (Oxford) (2000), 200(3), 218-229

CODEN: JMICAR; ISSN: 0022-2720

PUBLISHER: Blackwell Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Total internal reflection fluorescence (TIRF) microscopy, used in conjunction with flash photolysis, provides a useful way of studying the kinetics of macromol. interactions. The authors compare different TIRF optical geometries to establish an optimal combination. Excitation light was introduced via 4 different arrangements: (1) a prism positioned on the microscope optical axis, (2) an offset prism with propagation through a SiO₂ slide trans to the objective lens. (3) An offset prism with propagation through a SiO₂ coverslip cis to a H₂O-immersion objective lens and (4) a prismless arrangement using a high NA oil-immersion objective lens. Photolysis was achieved using a Xe flash lamp and a customized SiO₂ condenser lens. Single myosin mols. labeled with a Cy3 fluorophore were used as a test sample. Although the offset trans prism gave the best signal-to-background ratio, a customized thin rhombic prism incorporated, on axis, into the flash condenser assembly was almost as good and was more practical for scanning multiple fields. An oil-immersion lens gave the brightest image for sample depths < 30 .mu.m but above this limit, a H₂O-immersion lens was better. The prismless arrangement may offer advantages in other situations but it is important to check the actual numerical aperture of the objective lens.

IT 213904-25-7 213904-27-9

RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)

(optical geometries comparison for combined flash photolysis and total internal reflection fluorescence microscopy of myosin labeled with)

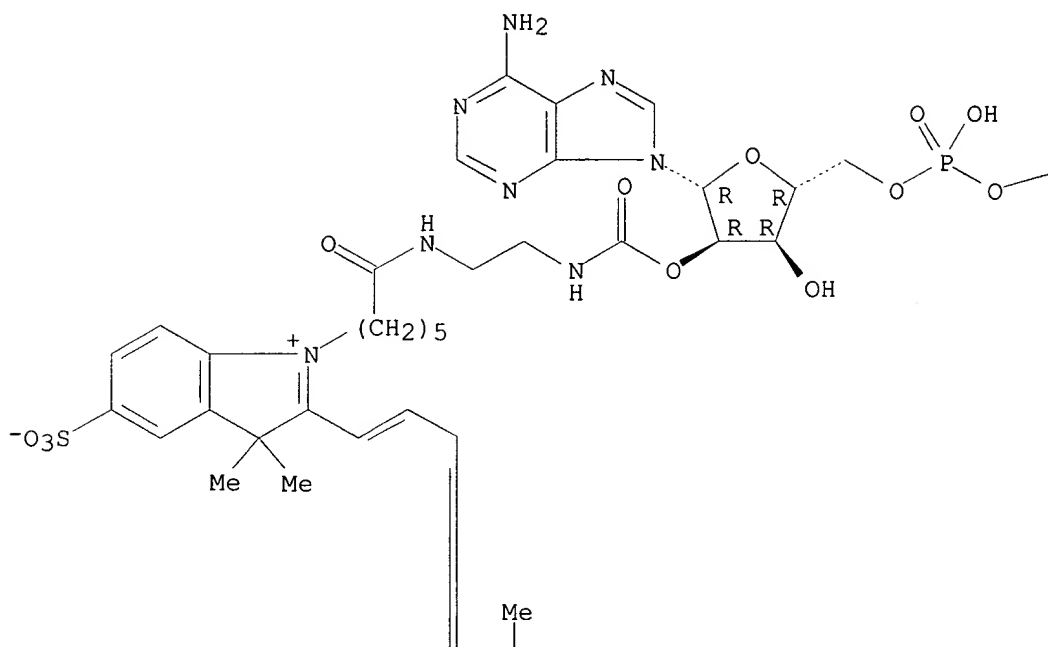
RN 213904-25-7 HCAPLUS

CN Adenosine 5'-(tetrahydrogen triphosphate), 2'-[[2-[[6-[2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]ethyl]carbamate], inner salt (9CI) (CA INDEX NAME)

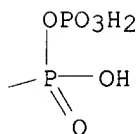
Absolute stereochemistry.

Double bond geometry unknown.

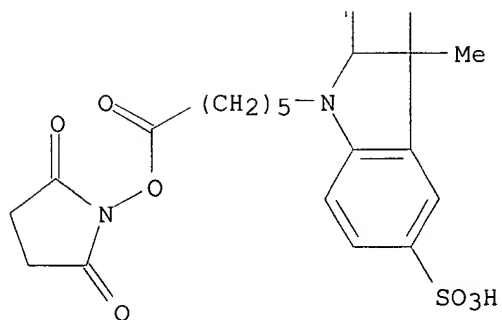
PAGE 1-A



PAGE 1-B



PAGE 2-A

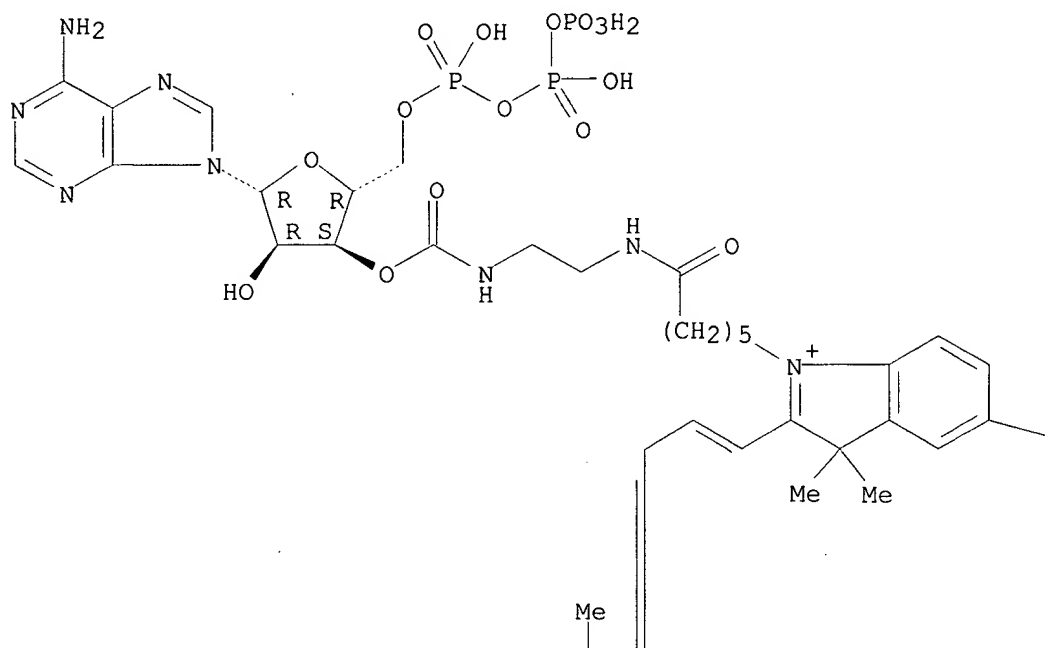


RN 213904-27-9 HCAPLUS
 CN Adenosine 5'-(tetrahydrogen triphosphate), 3'-[[2-[[6-[2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-

indol-2-ylidene]-1-propenyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]ethyl]carbamate], inner salt (9CI) (CA INDEX NAME)

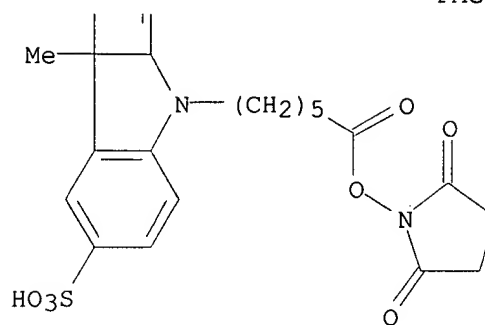
Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



PAGE 1-B

—SO₃⁻



REFERENCE COUNT:

24

THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 11

L14 ANSWER 11 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:825711 HCAPLUS

DOCUMENT NUMBER: 134:159683

TITLE: Identification of single fluorescently labelled mononucleotide molecules in solution by spectrally resolved time-correlated single-photon counting

AUTHOR(S): Herten, D. P.; Tinnefeld, P.; Sauer, M.

CORPORATE SOURCE: Physikalisch-Chemisches Institut, Universitat Heidelberg, Heidelberg, 69120, Germany

SOURCE: Applied Physics B: Lasers and Optics (2000), 71(5), 765-771

CODEN: APBOEM; ISSN: 0946-2171

PUBLISHER: Springer-Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We describe a method to identify single dye-labeled mononucleotide mols. in soln. with high classification probability based on confocal microscopy in combination with spectrally and time-resolved fluorescence detection with two detectors. For efficient excitation of the labeled mononucleotide mols. JA133-dUTP, JA169-dUTP, Cy5-dCTP, and JA242-dUTP a short-pulse diode laser emitting at 634 nm with a repetition rate of 64 MHz was applied. The time-resolved fluorescence signals of individual mols. were analyzed and identified by a max. likelihood estimator (MLE). Scatter plots of spectrally and time-resolved fluorescence data demonstrated the existence of four distinct populations with sym. shape. The distributions of each of the mononucleotide conjugates were detd. by fitting a superposition of two independent Gaussians. Taking only those single-mol. bursts which contain more than 50 photon counts, three labeled mononucleotide mols. were identified in soln. by spectrally and time-resolved fluorescence spectroscopy with a probability of correct classification of .apprxeq. 99%.

IT 325747-77-1

RL: ANT (Analyte); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study)

(identification of single fluorescently labeled mononucleotide mols. in soln. by spectrally resolved time-correlated single-photon counting)

RN 325747-77-1 HCAPLUS

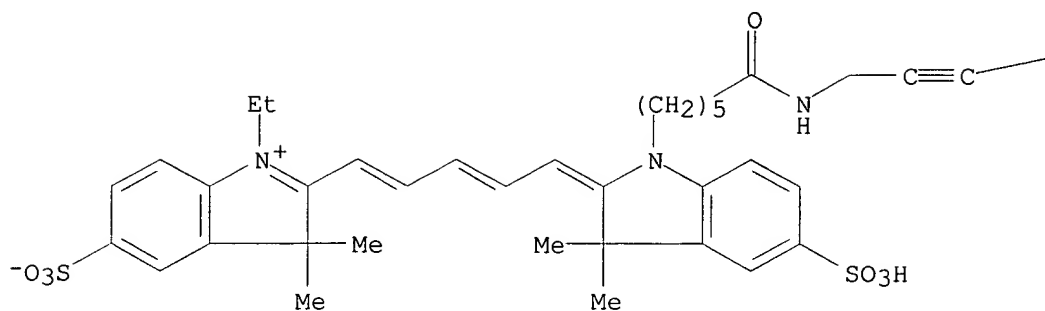
CN 3H-Indolium, 2-[5-[1-[6-[3-[4-amino-1-[2-deoxy-5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-erythro-pentofuranosyl]-1,2-dihydro-2-oxo-5-pyrimidinyl]-2-propynyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

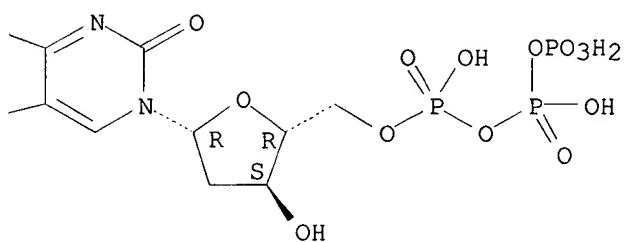
Double bond geometry unknown.

PAGE 1-A

H₂N—



PAGE 1-B



REFERENCE COUNT:

23

THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 12

L14 ANSWER 12 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:814658 HCAPLUS

DOCUMENT NUMBER: 133:345552

TITLE: High-density labeling of DNA with modified or
chromophore-tagged nucleotides using DNA polymerases

INVENTOR(S): Muehlegger, Klaus; Angerer, Bernhard; Seela, Frank;
Ankenbauer, Waltraud; Augustin, Martin; Gumbiowski,
Karin; Zulauf, Matthias

PATENT ASSIGNEE(S): Roche Diagnostics G.m.b.H., Germany

SOURCE: PCT Int. Appl., 56 pp.

CODEN: PIXXD2

DOCUMENT TYPE: **Patent**

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000068422	A2	20001116	WO 2000-EP4036	20000505 <--
WO 2000068422	A3	20020404		
W: JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1208230	A2	20020529	EP 2000-936714	20000505 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				

PRIORITY APPLN. INFO.:

EP 1999-108601 A 19990507 <--

WO 2000-EP4036 W 20000505 <--

AB Subjects of the inventions are methods for enzymic DNA labeling. Nucleotides modified to carry functional or detectable groups are incorporated into newly synthesized DNA by DNA polymerases. DNA is synthesized from modified nucleoside triphosphates by DNA polymerases such that the newly synthesized DNA consists exclusively of modified nucleotides or contains modified nucleotides in high d. There are provided modified nucleoside triphosphates which are incorporated by DNA polymerases and a group of DNA polymerases which incorporate these nucleoside triphosphates in high d. Thus, modified nucleoside triphosphates, such as 7-aminopentynyl-7-deazaadenosine-2'-deoxyribonucleoside-5'-triphosphate, were synthesized. Incorporation of this and other modified nucleoside triphosphates into DNA in the presence of template, primer, and Carboxydotherrmus hydrogenoformans, Pyrococcus, Thermococcus gorgonarius (Tgo), Pyrococcus woesei (Pwo), or a blend of Tgo and Pwo polymerases was analyzed. The combination of Tgo and Pwo polymerases seemed to be most effective.

IT 306274-02-2P 306274-03-3P 306274-04-4P

RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)

(high-d. labeling of DNA with modified or chromophore-tagged nucleotides using DNA polymerases)

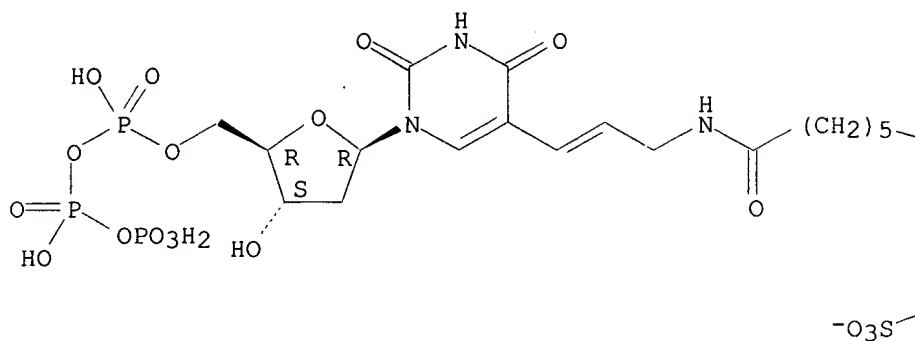
RN 306274-02-2 HCAPLUS

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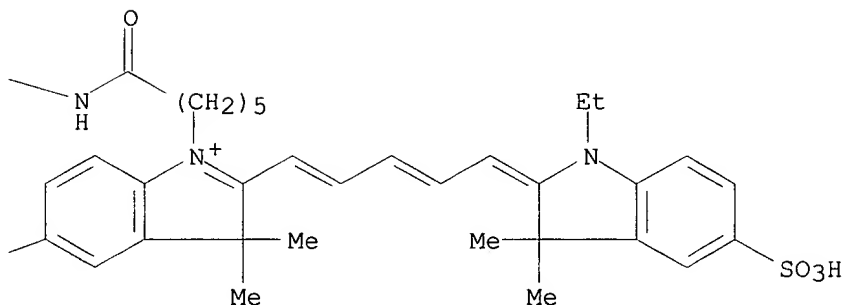
Absolute stereochemistry.

Double bond geometry unknown.

PAGE 1-A



PAGE 1-B

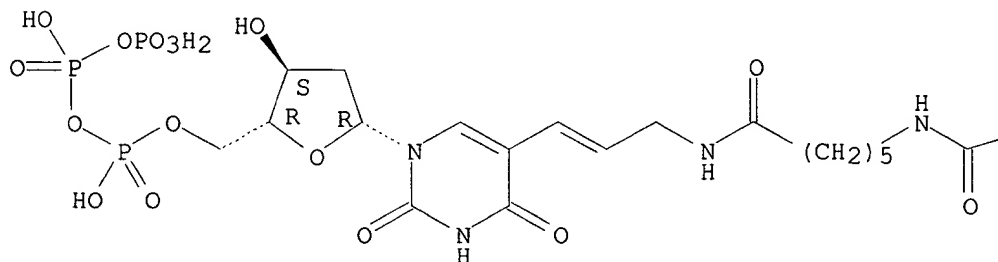


RN 306274-03-3 HCAPLUS

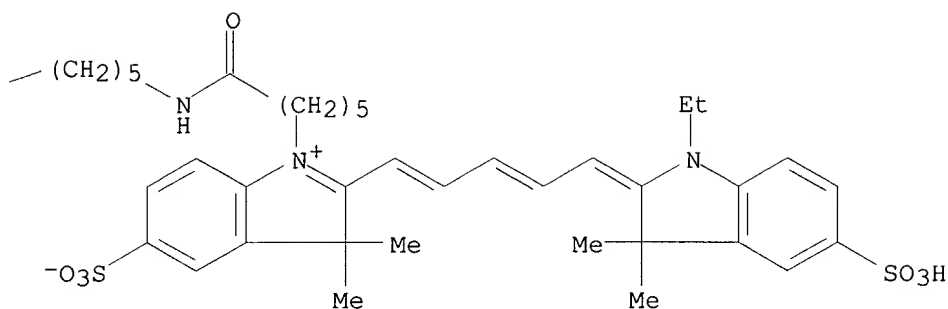
CN Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-5-[3-[[6-[[6-[[6-[2-[5-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]-1-oxohexyl]amino]-1-oxohexyl]amino]-1-propenyl]-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



PAGE 1-B

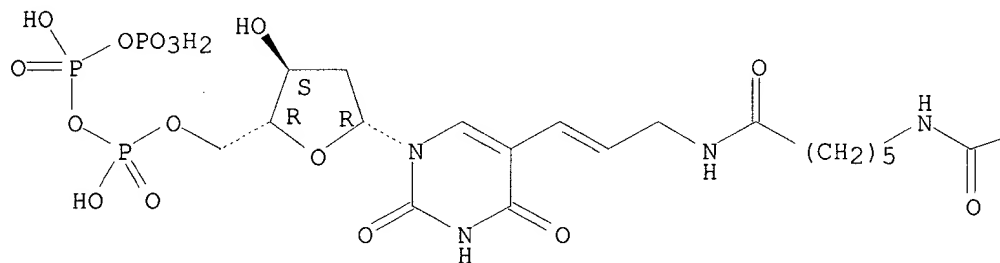


RN 306274-04-4 HCAPLUS

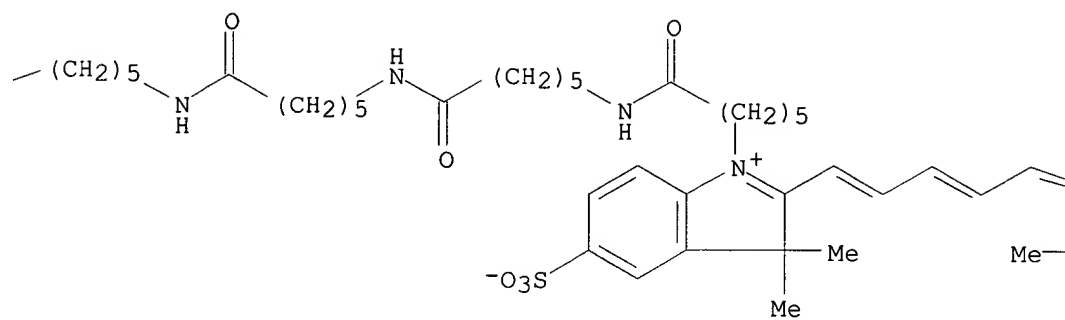
CN Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-5-[38-[2-[5-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-3H-indolio]-5,12,19,26,33-pentaoxo-4,11,18,25,32-pentaazaooctatriacont-1-en-1-yl]-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

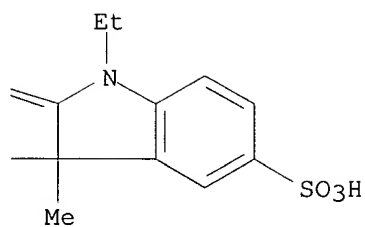
PAGE 1-A



PAGE 1-B



PAGE 1-C



=> d ibib abs hitstr 13

L14 ANSWER 13 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:397304 HCAPLUS

DOCUMENT NUMBER: 133:173509

TITLE: Comparative single-molecule and ensemble myosin
enzymology: sulfoindocyanine ATP and ADP derivatives

AUTHOR(S): Oiwa, Kazuhiro; Eccleston, John F.; Anson, Michael;
Kikumoto, Mahito; Davis, Colin T.; Reid, Gordon P.;
Ferenczi, Michael A.; Corrie, John E. T.; Yamada,
Akira; Nakayama, Haruto; Trentham, David R.

CORPORATE SOURCE: Communications Research Laboratory, Kansai Advanced
Research Center, Kobe, 651-2492, Japan

SOURCE: Biophysical Journal (2000), 78(6), 3048-3071

CODEN: BIOJAU; ISSN: 0006-3495

PUBLISHER: Biophysical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Single-mol. and macroscopic reactions of fluorescent nucleotides with myosin have been compared. The single-mol. studies serve as paradigms for enzyme-catalyzed reactions and ligand-receptor interactions analyzed as individual stochastic processes. Fluorescent nucleotides, called Cy3-EDA-ATP and Cy5-EDA-ATP, were derived by coupling the dyes Cy3.29.OH and Cy5.29.OH with 2'(3')-O-[N-(2-aminoethyl)carbamoyl]ATP (EDA-ATP). The ATP(ADP) analogs were sepd. into their resp. 2'- and 3'-O-isomers, the interconversion rate of which was 30[OH-] s-1 (0.016 h-1 at pH 7.1) at 22.degree.C. Macroscopic studies showed that 2'(3')-O-substituted nucleotides had properties similar to those of ATP and ADP in their interactions with myosin, actomyosin, and muscle fibers, although the ATP analogs did not relax muscle as well as ATP did. Significant differences in the fluorescence intensity of Cy3-nucleotide 2'- and 3'-O-isomers in free soln. and when they interacted with myosin were evident. Single-mol. studies using total internal reflection fluorescence microscopy showed that reciprocal mean lifetimes of the nucleotide analogs interacting with myosin filaments were one- to several-fold greater than predicted from macroscopic data. Kinetic and equil. data of nucleotide-(acto)myosin interactions derived from single-mol. microscopy now have a biochem. and physiol. framework. This is important for single-mol. mech. studies of motor proteins.

IT 288628-76-2P 288628-78-4P 288629-86-7P

RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(comparative single-mol. and ensemble myosin enzymol. using sulfoindocyanine ATP and ADP derivs.)

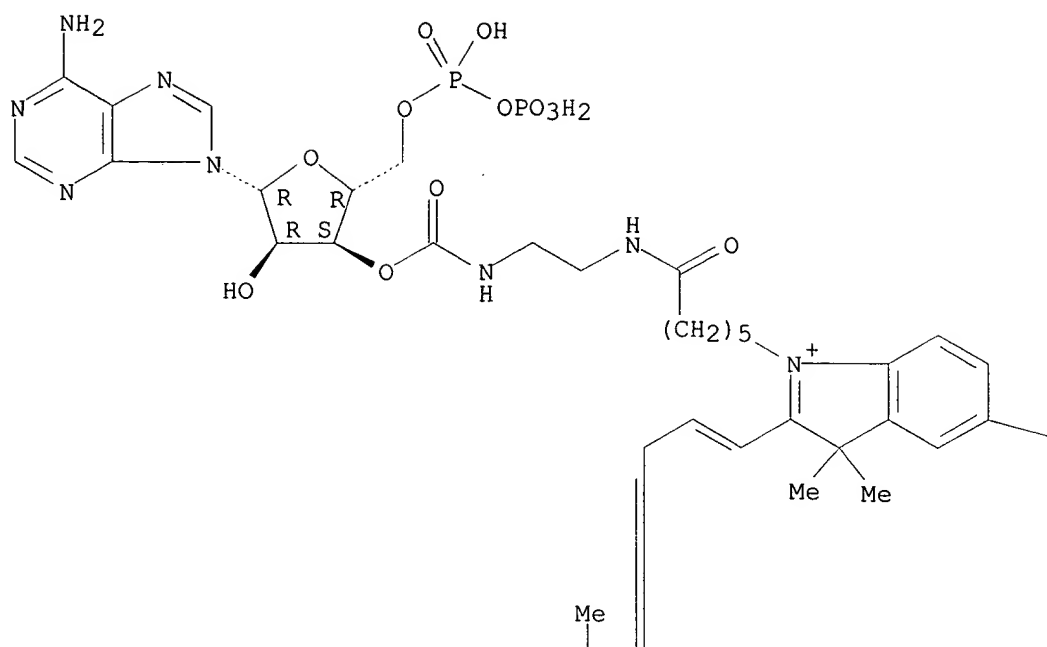
RN 288628-76-2 HCAPLUS

CN Adenosine 5'-(trihydrogen diphosphate), 3'-[[2-[[6-[2-[3-[1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]ethyl]carbamate] (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

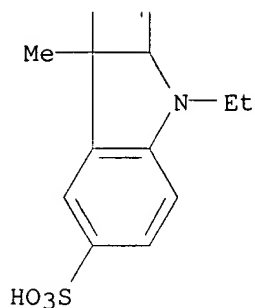
PAGE 1-A



PAGE 1-B

—SO₃⁻

PAGE 2-A

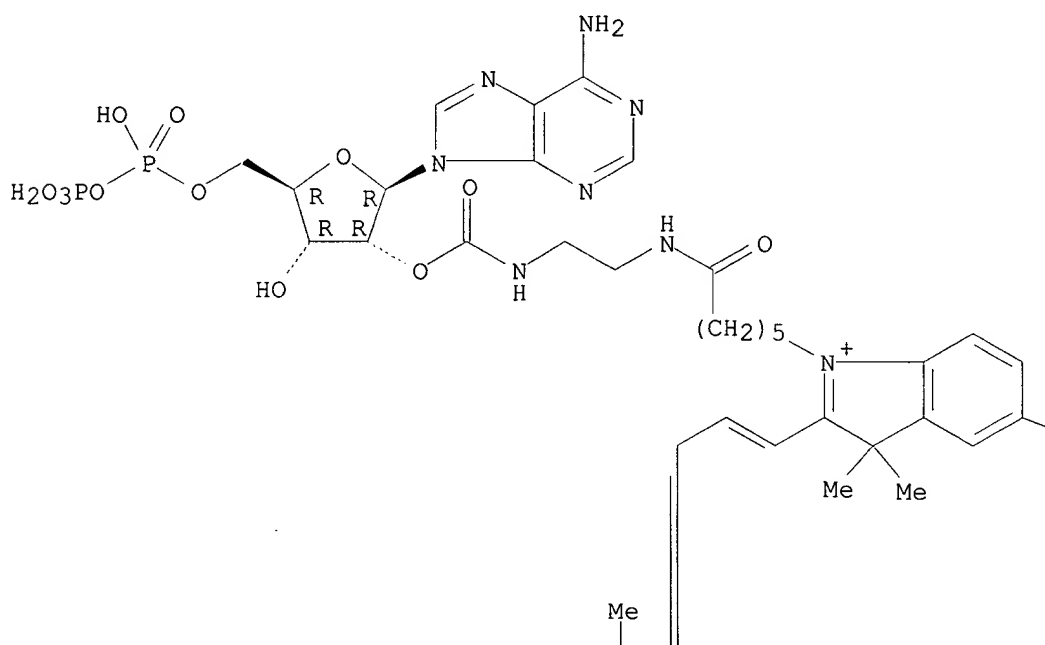


RN 288628-78-4 HCAPLUS

CN Adenosine 5'-(trihydrogen diphosphate), 2'-[[2-[[6-[2-[3-[1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]ethyl]carbamate] (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

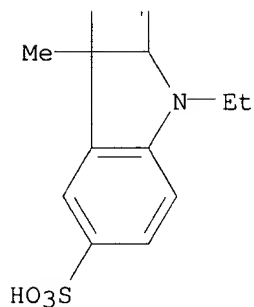
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PAGE 1-B

SO₃⁻

PAGE 2-A

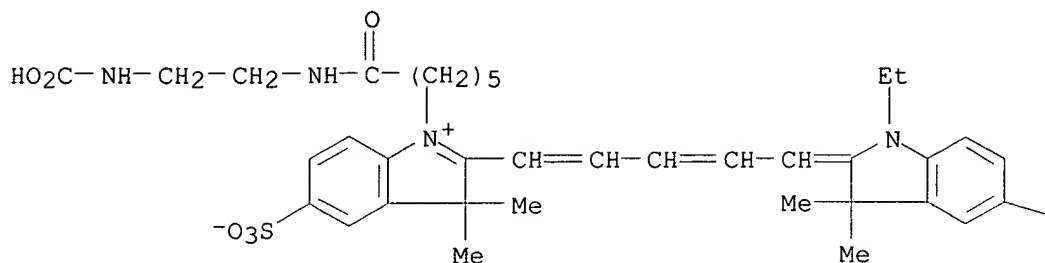


RN 288629-86-7 HCAPLUS
 CN Adenosine 5'-(trihydrogen diphosphate), 2'(or 3')-[[2-[[6-[2-[5-[1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]ethyl]carbamate] (9CI) (CA INDEX NAME)

CM 1

CRN 288629-84-5
 CMF C36 H46 N4 O9 S2
 CDES 8:EX

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- SO₃H

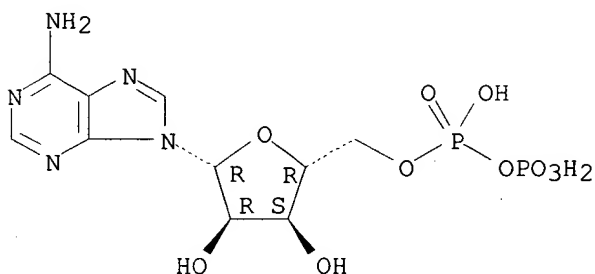
CM 2

CRN 58-64-0

CMF C10 H15 N5 O10 P2

CDES 5:B-D-RIBO

Absolute stereochemistry.



IT 192863-85-7P 288628-77-3P 288629-85-6P

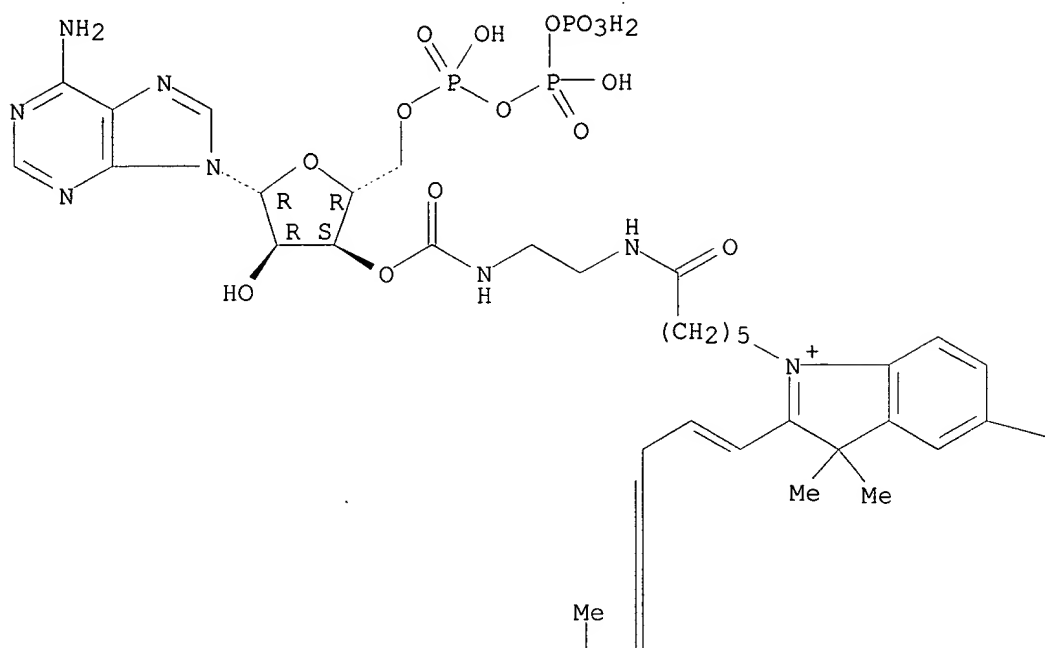
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses) (comparative single-mol. and ensemble myosin enzymol. using sulfoindocyanine ATP and ADP derivs.)

RN 192863-85-7 HCAPLUS

CN Adenosine 5'-(tetrahydrogen triphosphate), 3'-[[2-[[6-[2-[3-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1-propenyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]ethyl]carbamate], inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

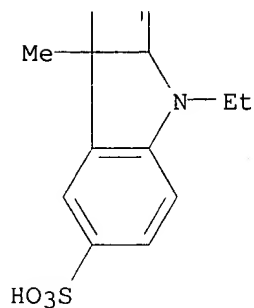
PAGE 1-A



PAGE 1-B

SO_3^-

PAGE 2-A

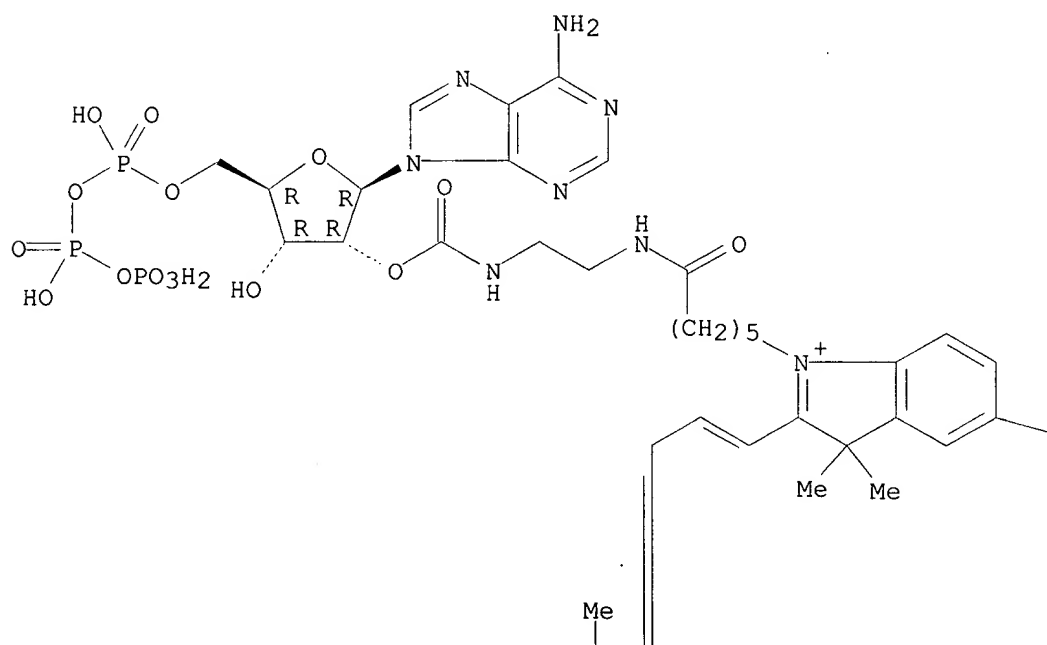


RN 288628-77-3 HCAPLUS

CN Adenosine 5'-(tetrahydrogen triphosphate), 2'-[[2-[[6-[2-[3-[1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]ethyl]carbamate] (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

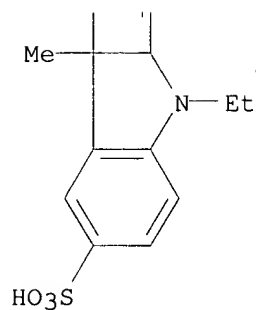
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PAGE 1-B

—SO₃⁻

PAGE 2-A

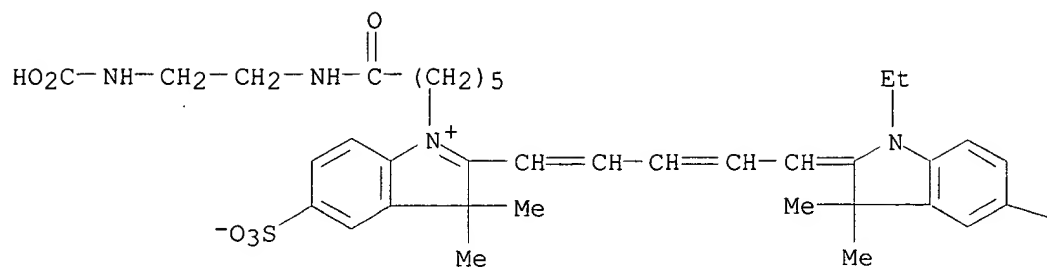


RN 288629-85-6 HCAPLUS
 CN Adenosine 5'-(tetrahydrogen triphosphate), 2'(or 3')-[[2-[[6-[2-[5-[1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]ethyl]carbamate] (9CI) (CA INDEX NAME)

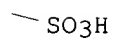
CM 1

CRN 288629-84-5
 CMF C36 H46 N4 O9 S2
 CDES 8:EX

PAGE 1-A



PAGE 1-B



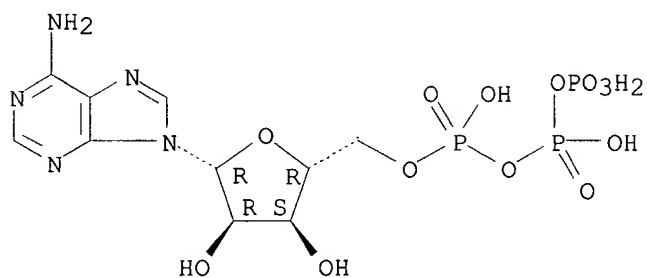
CM 2

CRN 56-65-5

CMF C10 H16 N5 O13 P3

CDES 5:B-D-RIBO

Absolute stereochemistry.



REFERENCE COUNT:

79

THERE ARE 79 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 14

L14 ANSWER 14 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1999:511278 HCAPLUS

DOCUMENT NUMBER: 131:140472

TITLE: Dideoxy dye-labeled terminators for DNA sequencing

INVENTOR(S): Kumar, Shiv; Nampalli, Satyam; McArdle, Bernard F.; Fuller, Carl W.

PATENT ASSIGNEE(S): Amersham Pharmacia Biotech, Inc., USA

SOURCE: PCT Int. Appl., 40 pp.

CODEN: PIXXD2

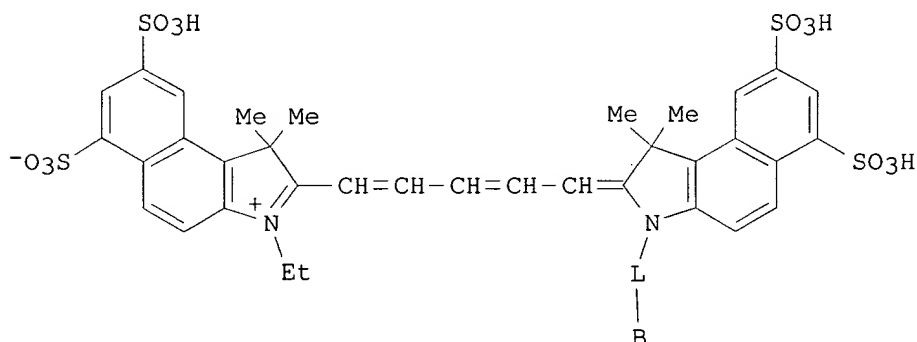
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9940223	A1	19990812	WO 1999-US2104	19990202 <--
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2319777	AA	19990812	CA 1999-2319777	19990202 <--
AU 9925717	A1	19990823	AU 1999-25717	19990202 <--
EP 1060264	A1	20001220	EP 1999-905589	19990202 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002505853	T2	20020226	JP 2000-530633	19990202 <--
PRIORITY APPLN. INFO.:				
			US 1998-18695	A 19980204 <--
			WO 1999-US2104	W 19990202 <--
OTHER SOURCE(S): MARPAT 131:140472				
GI				



AB A kit is provided for DNA sequencing comprising a first, second, third and fourth dye-labeled terminator mols., each of the dye terminator mols. comprising a dye mol., a linker of at least 10 atoms in length and a dideoxynucleoside mono- or triphosphate, and a thermostable DNA polymerase. The dye terminators provide uniform band intensities and the resoln. of dye-induced compression artifacts in DNA sequencing. The dideoxy dye-labeled terminators of the present invention are particularly well suited for use with DNA polymerases that are thermostable or which

contain an altered dNMP binding site. Their use do not require the use of nucleotide analogs such as dITP or .alpha.-thio nucleotides to eliminate dye-induced compression artifacts. There is a strong correlation between the length of the link between the dye mol. and the nucleotide and band uniformity, but little correlation between the type of dye (or other parameters) and band intensity. Dye terminators with linkers of 10 or more atoms up to 25 atoms when used in sequencing reactions produce bands in sequencing gels of significantly improved uniformity compared with dye terminators with linkers less than 10 atoms. In preferred embodiments, the dye terminators comprise structure I (B = 2',3'-dideoxy-7-deaza-ATP or -GTP or 2',3'-dideoxy-UTP or -CTP; L = linker attached to 7 position of purines or 5 position of pyrimidines; when B = deaza-ddATP or deaza-ddGTP, L = C.tplbond.CCH2NHCO(CH2)5; when B = ddUTP or ddCTP, L = C.tplbond.CCH2NHCO(CH2)5NHCO(CH2)5).

IT 235743-48-3P 235743-49-4P 235743-50-7P

235743-51-8P

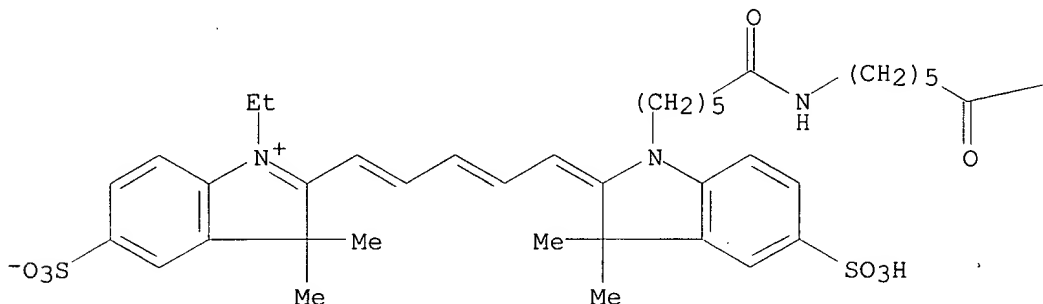
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(dideoxy dye-labeled terminators for DNA sequencing)

RN 235743-48-3 HCAPLUS

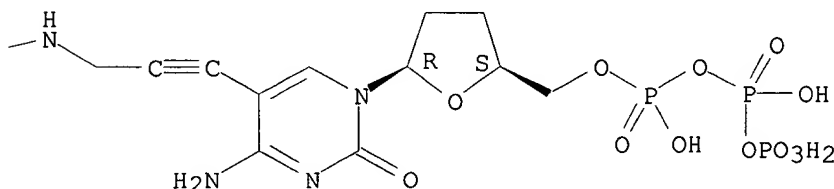
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(CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

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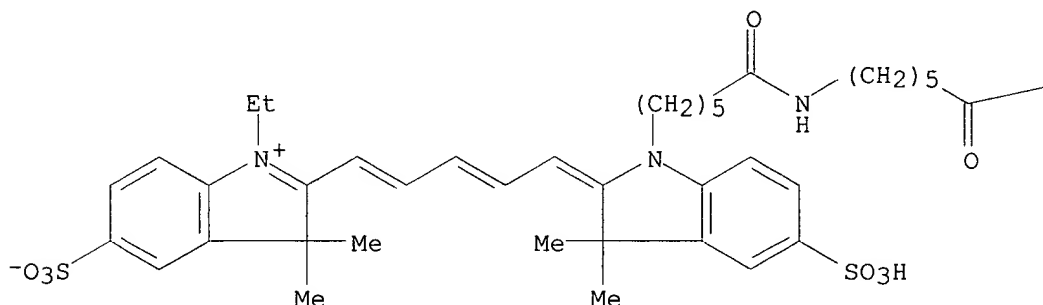
RN 235743-49-4 HCAPLUS

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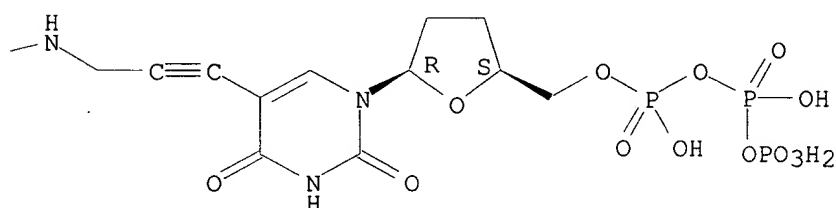
tetrahydroxy-3,5,7-trioxido-2,4,6-trioxa-3,5,7-triphosphahept-1-yl)-2-furanyl]-5-pyrimidinyl]-2-propynyl]amino]hexyl]amino]hexyl]-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



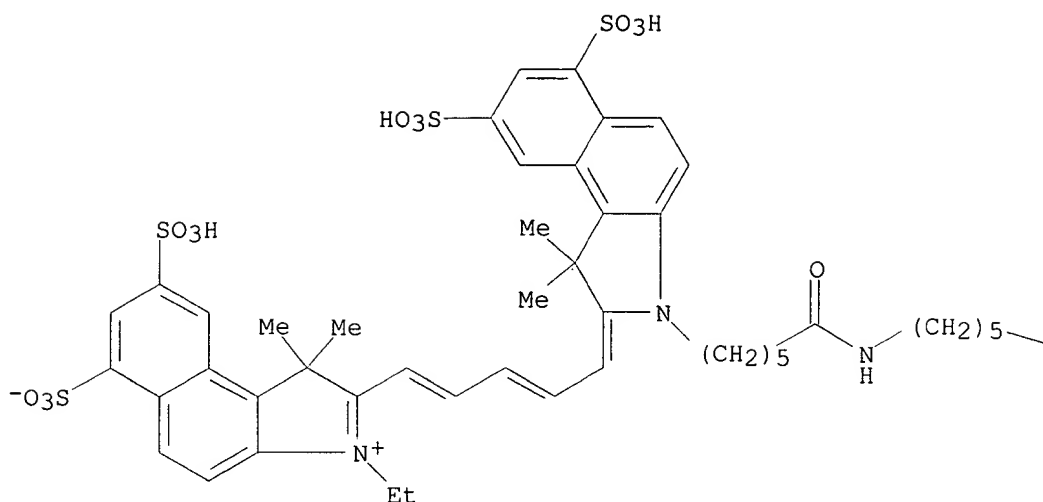
PAGE 1-B



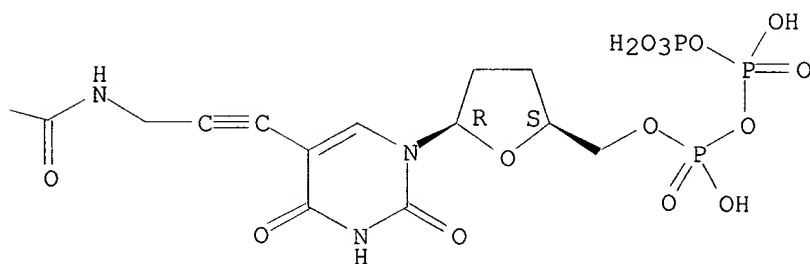
RN 235743-50-7 HCAPLUS

CN 1H-Benz[e]indolium, 2-[5-[1,3-dihydro-1,1-dimethyl-3-[6-oxo-6-[[6-oxo-6-[[3-[1,2,3,4-tetrahydro-2,4-dioxo-1-[(2R,5S)-tetrahydro-5-(3,5,7,7-tetrahydroxy-3,5,7-trioxido-2,4,6-trioxa-3,5,7-triphosphahept-1-yl)-2-furanyl]-5-pyrimidinyl]-2-propynyl]amino]hexyl]amino]hexyl]-6,8-disulfo-2H-benz[e]indol-2-ylidene]-1,3-pentadienyl]-3-ethyl-1,1-dimethyl-6,8-disulfo-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



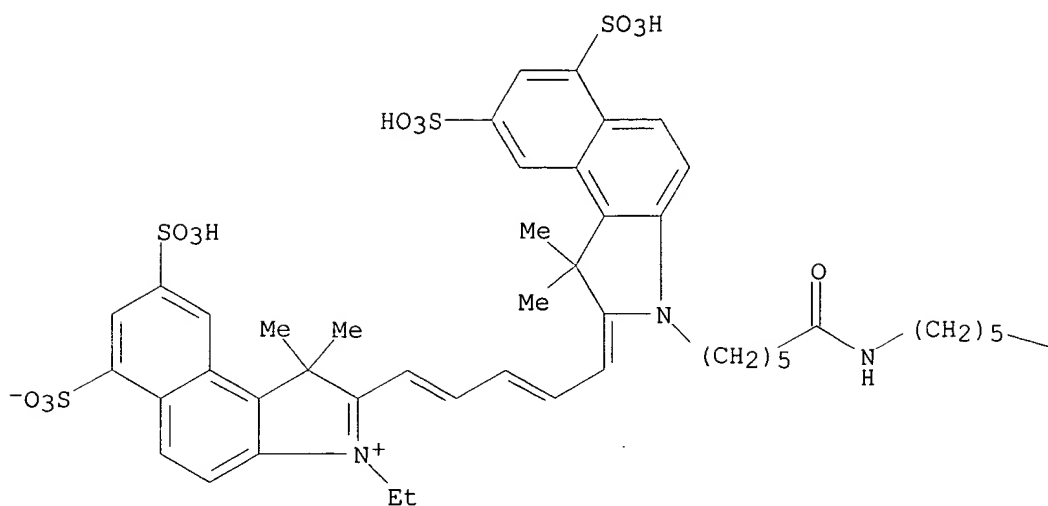
PAGE 1-B



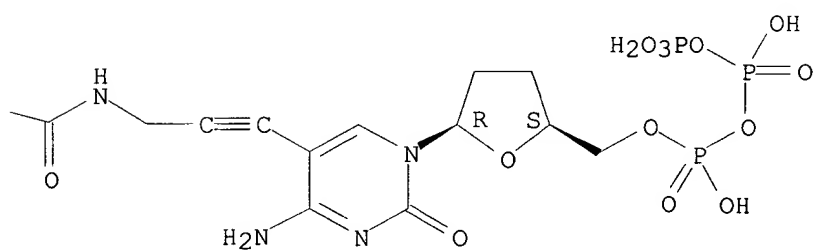
CN 1H-Benz[e]indolium, 2-[5-[3-[6-[[6-[[3-[4-amino-1,2-dihydro-2-oxo-1-
 [(2R,5S)-tetrahydro-5-(3,5,7,7-tetrahydroxy-3,5,7-trioxido-2,4,6-trioxa-
 3,5,7-triphosphahept-1-yl)-2-furanyl]-5-pyrimidinyl]-2-propynyl]amino]-6-
 oxohexyl]amino]-6-oxohexyl]-1,3-dihydro-1,1-dimethyl-6,8-disulfo-2H-
 benz[e]indol-2-ylidene]-1,3-pentadienyl]-3-ethyl-1,1-dimethyl-6,8-disulfo-
 , inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 15

L14 ANSWER 15 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1999:168972 HCAPLUS

DOCUMENT NUMBER: 131:2328

TITLE: Direct imaging of DNA in living cells reveals the dynamics of chromosome formation

AUTHOR(S): Manders, Erik M. M.; Kimura, Hiroshi; Cook, Peter R.

CORPORATE SOURCE: Sir William Dunn School of Pathology, University of Oxford, Oxford, OX1 3RE, UK

SOURCE: Journal of Cell Biology (1999), 144(5), 813-821

CODEN: JCLBA3; ISSN: 0021-9525

PUBLISHER: Rockefeller University Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Individual chromosomes are not directly visible within the interphase nuclei of most somatic cells; they can only be seen during mitosis. We have developed a method that allows DNA strands to be obsd. directly in living cells, and we use it to analyze how mitotic chromosomes form. A fluorescent analog (e.g., Cy5-dUTP) of the natural precursor, thymidine triphosphate, is introduced into cells, which are then grown on the heated stage of a confocal microscope. The analog is incorporated by the endogenous enzymes into DNA. As the mechanisms for recognizing and removing the unusual residues do not prevent subsequent progress around the cell cycle, the now fluorescent DNA strands can be followed as they assemble into chromosomes, and segregate to daughters and grand-daughters. Movies of such strands in living cells suggest that chromosome axes follow simple recognizable paths through their territories during G2 phase, and that late replicating regions maintain their relative positions as prophase chromosomes form. Quant. anal. confirms that individual regions move little during this stage of chromosome condensation. As a result, the gross structure of an interphase chromosome territory is directly related to that of the prophase chromosome.

IT 158613-49-1

RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(direct imaging of DNA in living cells reveals the dynamics of chromosome formation)

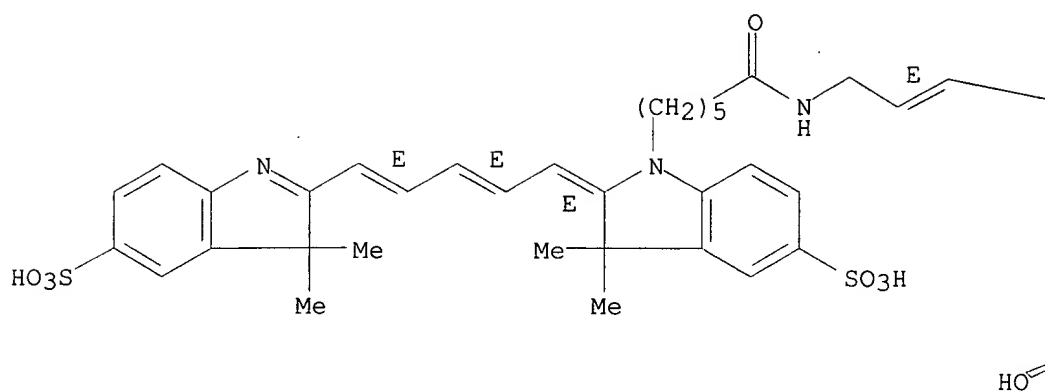
RN 158613-49-1 HCAPLUS

CN Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-5-[(1E)-3-[[6-[(2E)-2-[(2E,4E)-5-(3,3-dimethyl-5-sulfo-3H-indol-2-yl)-2,4-pentadienylydene]-2,3-dihydro-3,3-dimethyl-5-sulfo-1H-indol-1-yl]-1-oxohexyl]amino]-1-propenyl]-(9CI) (CA INDEX NAME)

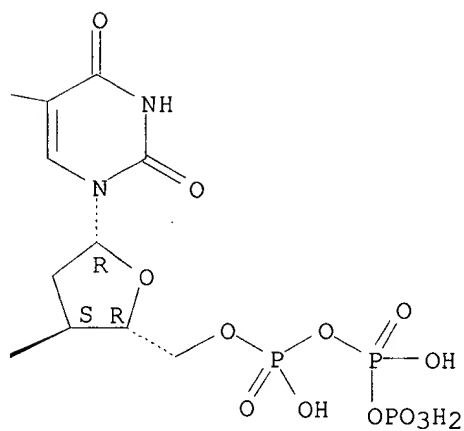
Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT:

43

THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 16

L14 ANSWER 16 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:597396 HCAPLUS

DOCUMENT NUMBER: 130:1959

TITLE: New NIR dyes: synthesis, spectral properties and applications in DNA analyses

AUTHOR(S): Narayanan, Narasimhachari; Little, Garrick; Raghavachari, Ramesh; Gibson, Jasmin; Lugade, Ananda; Prescott, Chuck; Reiman, Kevin; Roemer, Steve; Steffens, Dave; Sutter, Scott; Draney, Daniel

CORPORATE SOURCE: LI-COR, Inc., Biotech Division, Lincoln, NE, 68504, USA

SOURCE: NATO ASI Series, Series 3: High Technology (1998), 52(Near-Infrared Dyes for High Technology Applications), 141-158
CODEN: NAHTF4; ISSN: 1383-7168

PUBLISHER: Kluwer Academic Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB New pentamethine and heptamethine monofunctional asym. cyanine dyes have been synthesized. They are suitable for independently exciting at 680nm and 780nm laser diodes resp. The absorption and fluorescence characteristics such as molar absorptivity and quantum yield have been examd. in various solvents. A new spectrofluorometer, an instrument built in house is described. The dyes having a terminal hydroxyl group (1, 3, 4, 5 and 8) have been successfully attached to oligonucleotides on an automated DNA synthesizer through phosphoramidite chem. The dyes with carboxyl (2) and isothiocyanate functional groups (7) have been coupled directly to deoxyribonucleotides (dATP). The dye labeled primers and dye labeled dATPs provide excellent sensitivity and high throughput when used for sequencing and genotyping applications on LI-COR's 4200 automated DNA analyzer which independently detects at two wavelengths.

IT 215789-35-8P

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(synthesis, spectral properties of new NIR dyes and applications in DNA analyses)

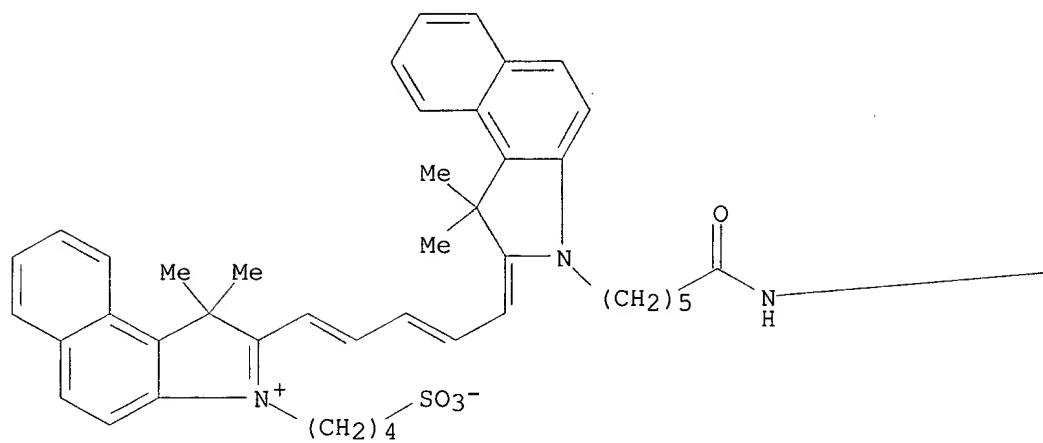
RN 215789-35-8 HCAPLUS

CN 1H-Benz[e]indolium, 2-[5-[3-[6-[[6-[[9-[2-deoxy-5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-erythro-pentofuranosyl]-9H-purin-6-yl]amino]hexyl]amino]-6-oxohexyl]-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene]-1,3-pentadienyl]-1,1-dimethyl-3-(4-sulfoobutyl)-, inner salt, tetralithium salt (9CI) (CA INDEX NAME)

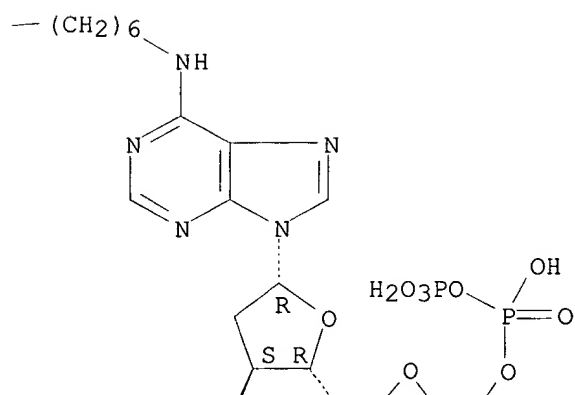
Absolute stereochemistry.

Double bond geometry unknown.

PAGE 1-A



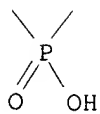
PAGE 1-B



PAGE 2-A

●4 Li

PAGE 2-B



REFERENCE COUNT:

30

THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 17

L14 ANSWER 17 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:514958 HCAPLUS

DOCUMENT NUMBER: 129:271927

TITLE: ATPase kinetics of the Dictyostelium discoideum myosin II motor domain

AUTHOR(S): Kuhlman, Philip A.; Bagshaw, Clive R.

CORPORATE SOURCE: Department of Biochemistry, University of Leicester, Leicester, LE1 7RH, UK

SOURCE: Journal of Muscle Research and Cell Motility (1998), 19(5), 491-504

CODEN: JMRMD3; ISSN: 0142-4319

PUBLISHER: Chapman & Hall

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Structural characterization of the mode of interaction of nucleotides bound to myosin has relied upon the crystal structure of the Dictyostelium discoideum myosin II motor domain. This fragment, denoted SldC, lacks the regulatory domain and light chain subunits and may therefore fail to display the normal ATPase activity of the intact myosin mol. Here we show that the elementary steps of the SldC ATPase pathway and the effects of actin are similar to those of the complete myosin head fragment. This indicates that truncation at residue E759, with the removal of the light chain binding sites, is not crucial to catalytic activity. In particular, SldC does not show the anomalous tight binding of ADP displayed by the slightly shorter M754 construct reported elsewhere. We also show that the fluorescent analog Cy3-EDA-ATP is a good substrate for SldC and demonstrate the use of fluorescence correlation spectroscopy to det. the affinity of Cy3-EDA-ADP using microgram quantities of proteins.

IT 213904-25-7 213904-27-9

RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)

(ATPase kinetics of the Dictyostelium discoideum myosin II motor domain)

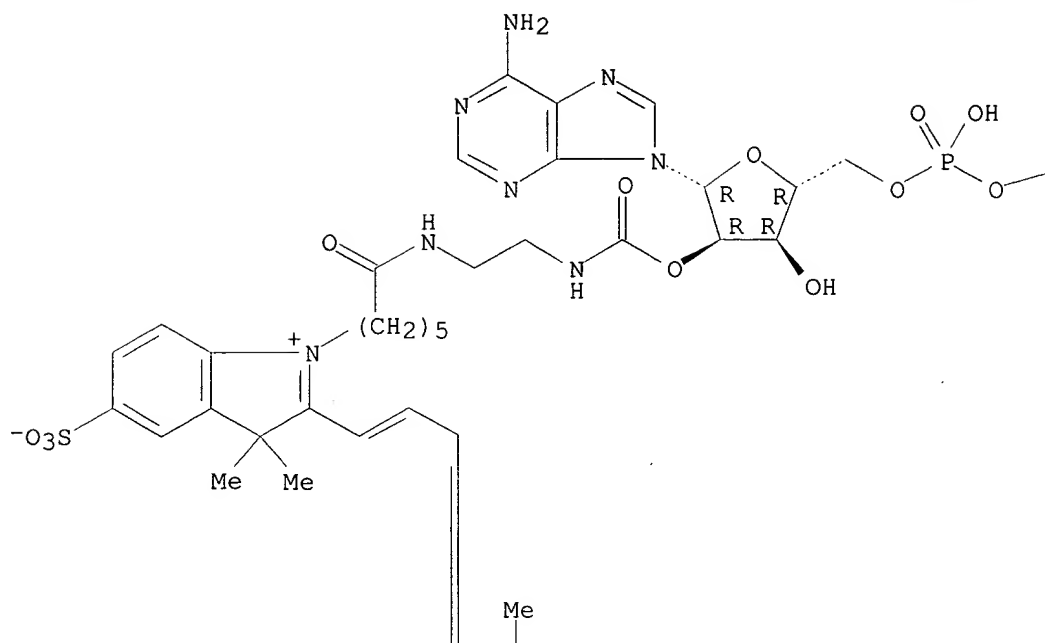
RN 213904-25-7 HCAPLUS

CN Adenosine 5'-(tetrahydrogen triphosphate), 2'-[[2-[[6-[2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]ethyl]carbamate], inner salt (9CI) (CA INDEX NAME)

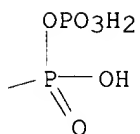
Absolute stereochemistry.

Double bond geometry unknown.

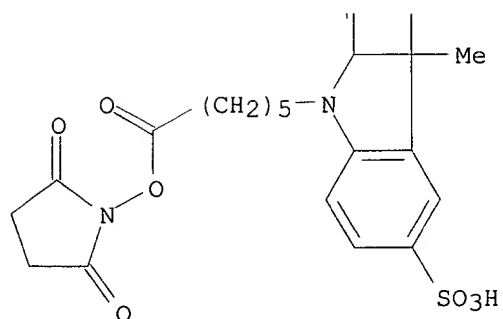
PAGE 1-A



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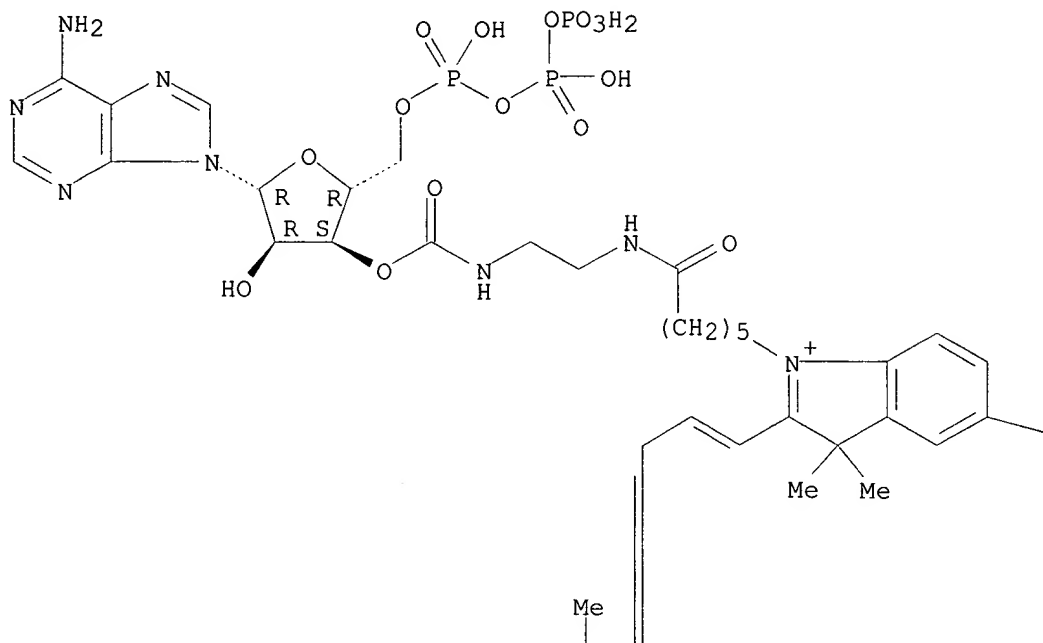


RN 213904-27-9 HCAPLUS
 CN Adenosine 5'-(tetrahydrogen triphosphate), 3'-[[2-[[6-[2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-

indol-2-ylidene]-1-propenyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]ethyl]carbamate], inner salt (9CI) (CA INDEX NAME)

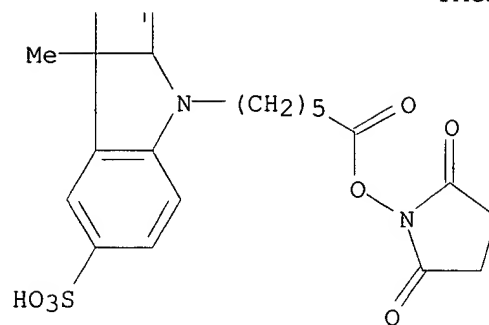
Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



PAGE 1-B

—SO₃⁻



=> d ibib abs hitstr 18

L14 ANSWER 18 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:312612 HCAPLUS

DOCUMENT NUMBER: 129:78684

TITLE: Time-resolved identification of individual mononucleotide molecules in aqueous solution with pulsed semiconductor lasers

AUTHOR(S): Sauer, Markus; Arden-Jacob, Jutta; Drexhage, Karl H.; Gobel, Florian; Lieberwirth, Ulrike; Muhlegger, Klaus; Muller, Ralph; Wolfrum, Jurgen; Zander, Christoph

CORPORATE SOURCE: Physikalisches-Chemisches Institut, Universitat Heidelberg, Heidelberg, 69120, Germany

SOURCE: Bioimaging (1998), 6(1), 14-24

CODEN: BOIMEL; ISSN: 0966-9051

PUBLISHER: Institute of Physics Publishing

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We applied a short-pulse diode laser emitting at 640 nm with a repetition rate of 56 MHz in combination with a confocal microscope to study bursts of fluorescence photons from individual differently labeled mononucleotide mols. in water. Two newly synthesized dyes, an oxazine dye (MR121) and a rhodamine dye (JA53), and two com. available dyes, a carbocyanine dye (Cy5) and a bora-diaza-indacene dye (Bodipy630/650), were used as fluorescent labels. The time-resolved fluorescence signals of individual mononucleotide mols. in water were analyzed and identified by a max. likelihood estimator (MLE). Taking only those single mol. transits which contain more than 30 collected photoelectrons, the two labeled mononucleotide mols., Cy5-dCTP and Bodipy-dUTP, can be identified by time-resolved fluorescence spectroscopy with a probability of correct classification of greater than 99%. Our results show that at least three differently labeled mononucleotide mols. can be identified in a common aq. soln. We obtain an overall classification probability of 90% for the time-resolved identification of Cy5-dCTP, MR121-dUTP and Bodipy-dUTP mols. via their characteristic fluorescence lifetimes of 1.05.+-.0.33 ns (Cy5-dCTP), 2.07.+-.0.59 ns (MR121-dUTP) and 3.88.+-.1.71 ns (Bodipy-dUTP).

IT 206271-55-8

RL: ANT (Analyte); ANST (Analytical study)

(time-resolved identification of individual mononucleotide mols. in aq. soln. with pulsed semiconductor lasers)

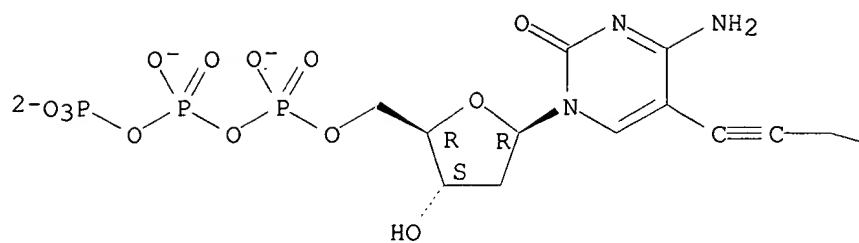
RN 206271-55-8 HCAPLUS

CN Cytidine 5'-(tetrahydrogen triphosphate), 2'-deoxy-5-[3-[[6-[2-[(1E,3E,5E)-5-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]-1-propynyl]-, inner salt, ion(5-) (9CI) (CA INDEX NAME)

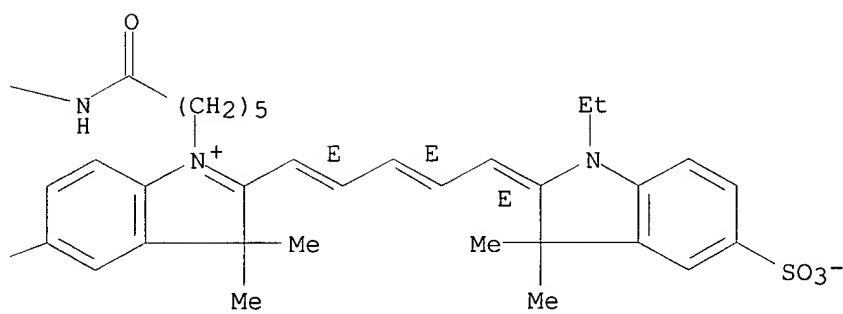
Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



=> d ibib abs hitstr 19

L14 ANSWER 19 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:220741 HCAPLUS

DOCUMENT NUMBER: 128:303476

TITLE: Single-molecule counting and identification in a microcapillary

AUTHOR(S): Zander, C.; Drexhage, K. H.; Han, K.-T.; Wolfrum, J.; Sauer, M.

CORPORATE SOURCE: Im Neuenheimer Feld 253, Physikalisch-Chemisches Institut, Universitat Heidelberg, Heidelberg, D-69120, Germany

SOURCE: Chemical Physics Letters (1998), 286(5,6), 457-465

CODEN: CHPLBC; ISSN: 0009-2614

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Using a confocal microscope the authors studied photon bursts from individual mols. (dye-labeled mononucleotides) flowing in a cone-shaped microcapillary with an inner diam. of 0.5 .mu.m at the small end of the cone. The flow of the conjugates was established by electrokinetic forces. Excitation of the fluorophore was provided by a pulsed diode laser (.lambda. = 640 nm, av. power 800 .mu.W, repetition rate 56 MHz). The characteristic diffusion and flow time through the laser focus and burst size statistics were detd. in the microcapillary as well as in an open vol. Applying time-correlated single-photon counting, two different conjugate species (Cy5-dCTP, JA53-dUTP) can be distinguished due to their characteristic fluorescence decay time with a probability of correct classification of 80%.

IT 206271-55-8, Cy 5dCTP tetraanion

RL: ANT (Analyte); ANST (Analytical study)

(Cy 5dCTP; single-mol. counting and identification in microcapillary)

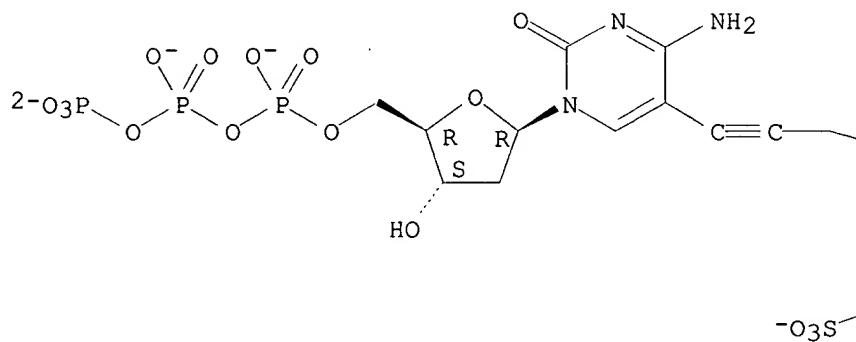
RN 206271-55-8 HCAPLUS

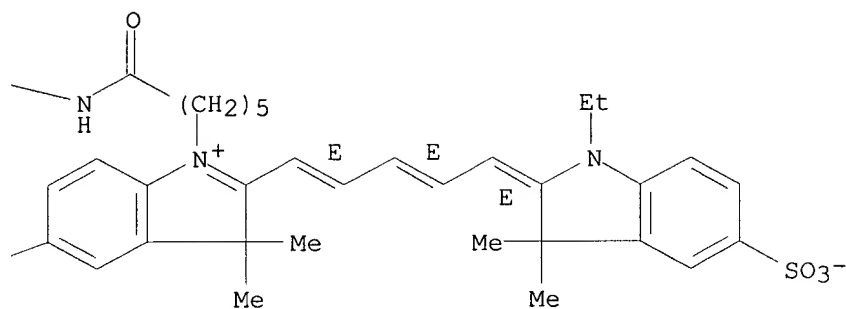
CN Cytidine 5'-(tetrahydrogen triphosphate), 2'-deoxy-5-[3-[[6-[2-[(1E,3E,5E)-5-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]-1-propynyl]-, inner salt, ion(5-) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A





=> d ibib abs hitstr 20

L14 ANSWER 20 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:71282 HCAPLUS
DOCUMENT NUMBER: 128:138318
TITLE: Sensors
INVENTOR(S): Issachar, David
PATENT ASSIGNEE(S): Sensors Technology Company B.V., Neth.; Issachar, David
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9802743	A1	19980122	WO 1997-IL221	19970702 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9732714	A1	19980209	AU 1997-32714	19970702 <--
PRIORITY APPLN. INFO.: IL 1996-118859 19960715 <-- WO 1997-IL221 19970702 <--				

AB The present invention concerns a sensor for detection of a biol. analyte in a test sample. The biol. analyte is a member of a pair forming group such as antigen/antibody, ligand/receptor, etc. The sensor comprises a porous matrix where in each cavity are entrapped a mol. capable of specifically binding to the analyte as well as an analyte-analog. Competitive displacement of the analyte-analog by the assayed analyte bring to change at least one detectable property of the sensor.

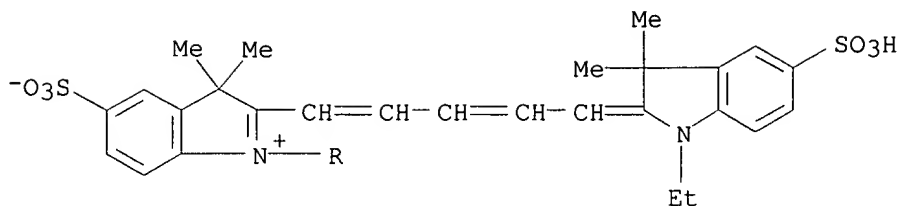
IT 202413-97-6P

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(sensor for detection of a biol. analyte in a test sample)

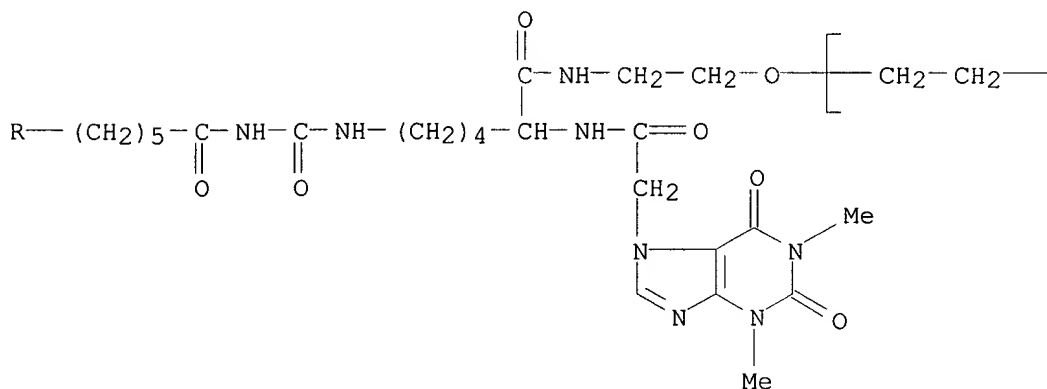
RN 202413-97-6 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-(2-aminoethyl)-.omega.-[2-[[[(2S)-6-[[[6-[2-[5-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]carbonyl]amino]-1-oxo-2-[[[(1,2,3,6-tetrahydro-1,3-dimethyl-2,6-dioxo-7H-purin-7-yl)acetyl]amino]hexyl]amino]ethoxy]-, inner salt (9CI) (CA INDEX NAME)

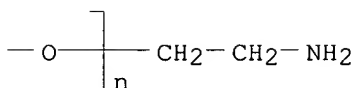
PAGE 1-A



PAGE 2-A



PAGE 2-B



IT 202414-00-4D, antibody conjugate

RL: RCT (Reactant); RACT (Reactant or reagent)

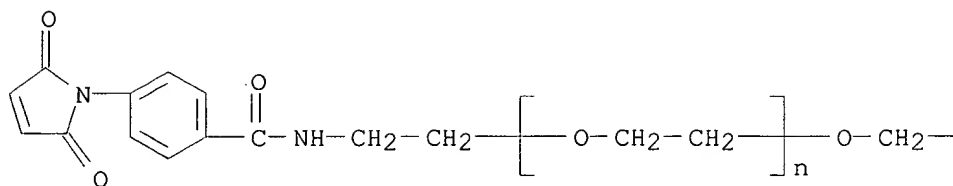
(sensor for detection of a biol. analyte in a test sample)

RN 202414-00-4 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-[2-[[[4-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)benzoyl]amino]ethyl]-.omega.-[2-[[[(2S)-6-[[[6-[2-[5-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-3H-indol-1-yl]amino]carbonyl]amino]-1-oxo-2-[[[1,2,3,6-tetrahydro-1,3-dimethyl-2,6-dioxo-7H-purin-7-yl]acetyl]amino]hexyl]amino]ethoxy]-, inner salt (9CI) (CA INDEX NAME)

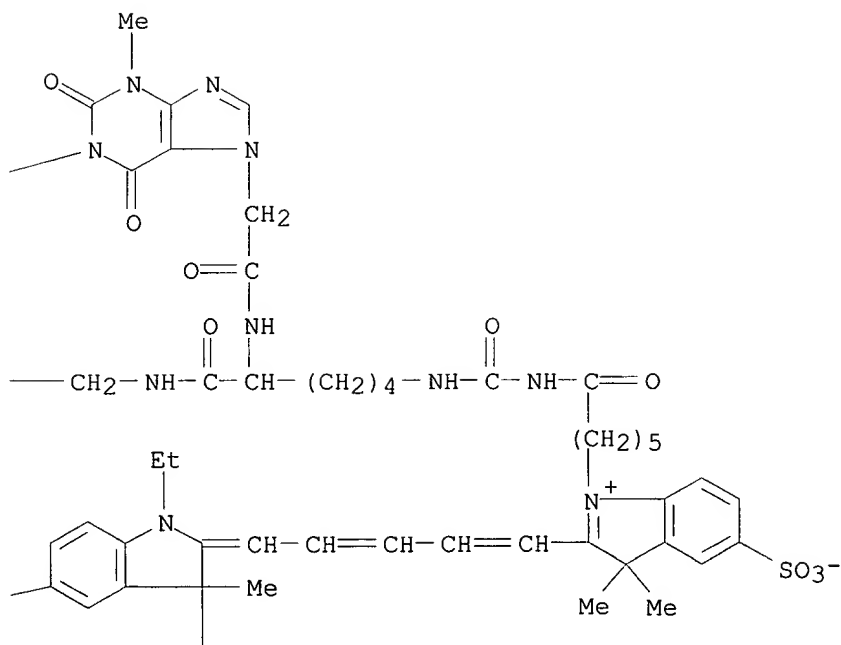
PAGE 1-A

Me



HO₃S

PAGE 1-B



|
Me

=> d ibib abs hitstr 21

L14 ANSWER 21 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1997:472614 HCAPLUS

DOCUMENT NUMBER: 127:145698

TITLE: Molecular mechanism controlling the incorporation of fluorescent nucleotides into DNA by PCR

AUTHOR(S): Zhu, Zhengrong; Waggoner, Alan S.

CORPORATE SOURCE: Center for Light Microscope Imaging and Biotechnology, Carnegie Mellon University, Pittsburgh, PA, USA

SOURCE: Cytometry (1997), 28(3), 206-211

CODEN: CYTODQ; ISSN: 0196-4763

PUBLISHER: Wiley-Liss

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The efficiency and yield of incorporation of fluorescent nucleotides into DNA by polymerase chain reaction (PCR) have been investigated with linear amplification (PCR with single-stranded template and single primer). In the present study, we prepd. single-stranded templates with defined sequences and used dUTP attached to the fluorescent label with linkers of different lengths. Incorporation and yield of the modified dUTP were reduced when the sequence demanded that multiple dyes be inserted at adjacent sites. The interactions between the polymerase and cyanine-labeled sites on the extending strand probably terminated the chain extension. Thus, because labeling d. was increased, the yield of PCR was reduced. We also found that the interactions between the primer and dye-labeled sites on template disturb primer annealing and lead to a decrease in PCR yield.

IT 159018-62-9 159018-64-1

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(mol. mechanism controlling the incorporation of fluorescent nucleotides into DNA by PCR)

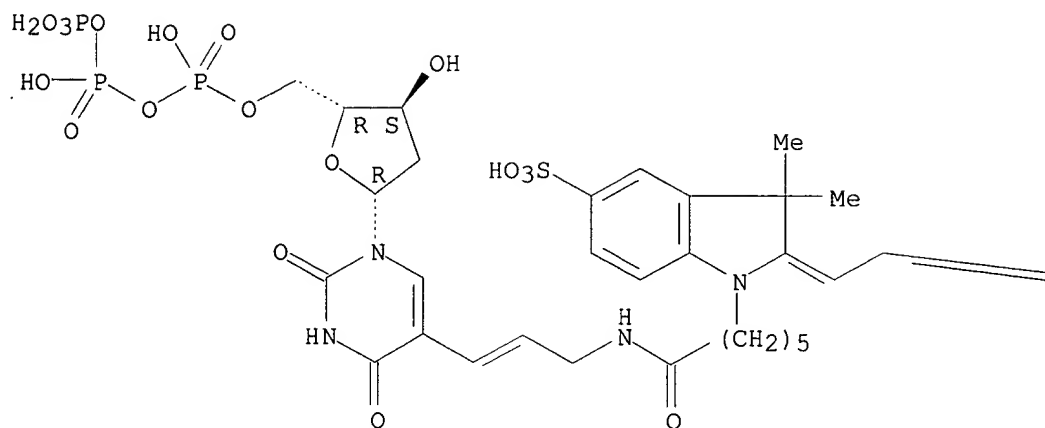
RN 159018-62-9 HCAPLUS

CN 3H-Indolium, 2-[3-[1-[6-[[3-[1-[2-deoxy-5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-erythro-pentofuranosyl]-1,2,3,4-tetrahydro-2,4-dioxo-5-pyrimidinyl]-2-propenyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

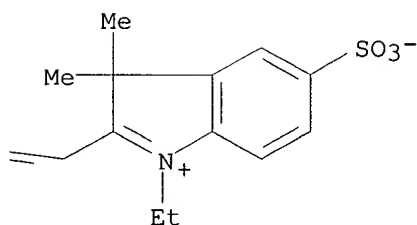
Absolute stereochemistry.

Double bond geometry unknown.

PAGE 1-A



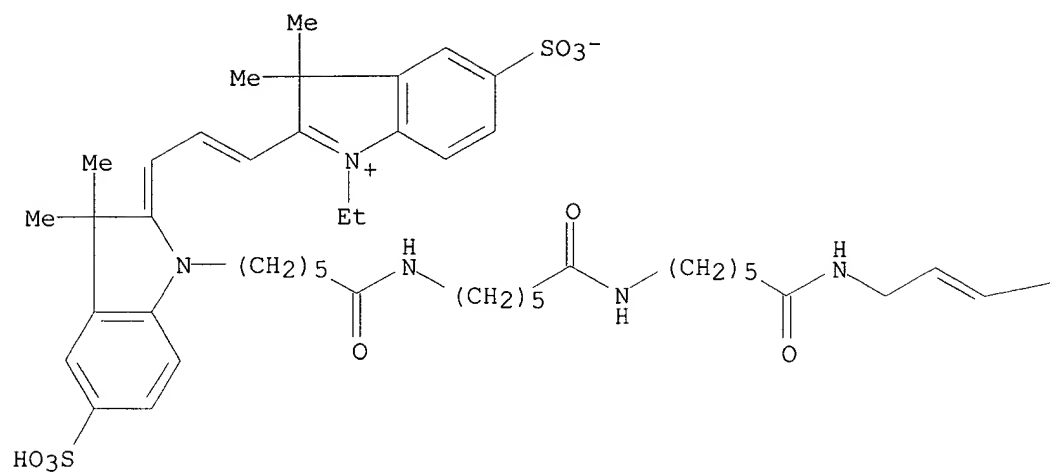
PAGE 1-B



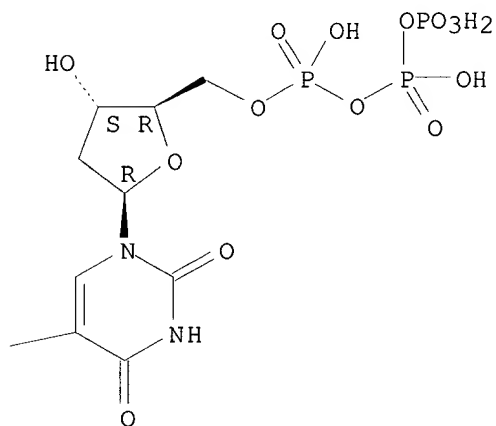
RN 159018-64-1 HCAPLUS
 CN 3H-Indolium, 2-[3-[1-[6-[[6-[[6-[[3-[1-[2-deoxy-5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-erythro-pentofuranosyl]-1,2,3,4-tetrahydro-2,4-dioxo-5-pyrimidinyl]-2-propenyl]amino]-6-oxohexyl]amino]-6-oxohexyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.

PAGE 1-A



PAGE 1-B



=> d ibib abs hitstr 22

L14 ANSWER 22 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1997:390729 HCAPLUS

DOCUMENT NUMBER: 127:119183

TITLE: Single molecule imaging of fluorophores and enzymic reactions achieved by objective-type total internal reflection fluorescence microscopy

AUTHOR(S): Tokunaga, Makio; Kitamura, Kazuo; Saito, Kiwamu; Iwane, Atsuko Hikikoshi; Yanagida, Toshio

CORPORATE SOURCE: Yanagida BioMotron Project, ERATO, JST, Osaka, 562, Japan

SOURCE: Biochemical and Biophysical Research Communications (1997), 235(1), 47-53

CODEN: BBRCA9; ISSN: 0006-291X

PUBLISHER: Academic

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Imaging of single fluorescence mols. has been achieved in a relatively simple manner using objective-type total internal reflection fluorescence microscopy (TIRFM). Switching from epi-fluorescence microscopy to objective-type TIRFM was achieved by translation of a single mirror in the system. Clear images of single mols. of an orange fluorescent dye, Cy3, were obtained with a fluorescence-to-background ratio of 12, using a conventional, high aperture objective (PlanApo, 100 .times., Na 1.4) with ordinary coverslips and immersion oil. This method allowed visualization of single mols. under scanning probe microscopes. Taking advantage of the technique of single mol. imaging, individual ATP turnovers have been visualized with a fluorescent ATP analog, Cy3-ATP, using a simple exptl. strategy. Clear on/off signals were obtained that correspond to the assocn. and dissocn. of single Cy3-ATP/ADP mols. with a single myosin head mol. This method will allow a variety of single-mol. assays of biomol. functions to be performed using fluorescently labeled substrates, ligands, messengers, and biol. active mols. Thus, the present technique provides a simple yet powerful and universal tool for researchers to probe the events of single mols.

IT 192863-85-7

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (single mol. imaging of fluorophores and enzymic reactions by total internal reflection fluorescence microscopy)

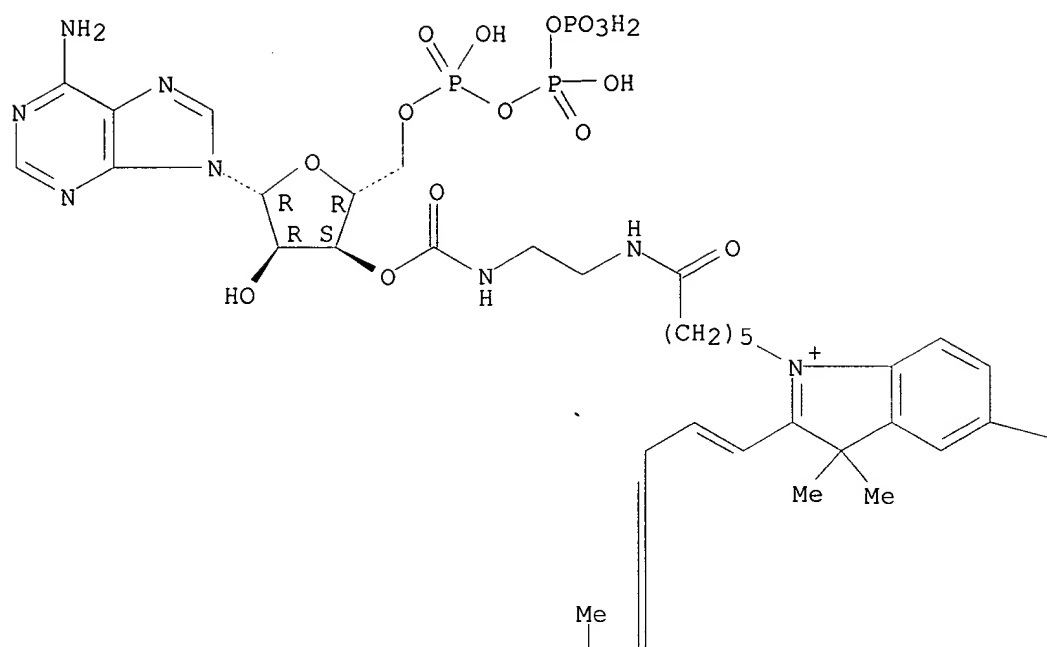
RN 192863-85-7 HCAPLUS

CN Adenosine 5'-(tetrahydrogen triphosphate), 3'-[[2-[[6-[2-[3-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1-propenyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]ethyl]carbamate], inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

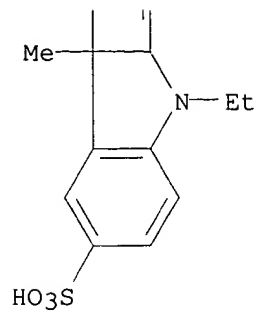
Double bond geometry unknown.

PAGE 1-A



PAGE 1-B

SO_3^-



=> d ibib abs hitstr 23

L14 ANSWER 23 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:572057 HCAPLUS

DOCUMENT NUMBER: 125:214232

TITLE: Stabilization of labeled nucleoside triphosphates with magnesium-binding compounds

INVENTOR(S): Duthie, R. Scott; Brush, Charles K.; Stirchak, Eugene P.; Freeman, Mark E.; Burazin, Lawrence J.

PATENT ASSIGNEE(S): Pharmacia Biotech Inc., USA

SOURCE: PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9622298	A1	19960725	WO 1996-US274	19960105 <--
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5808043	A	19980915	US 1995-374456	19950118
CA 2210900	AA	19960725	CA 1996-2210900	19960105 <--
AU 9647497	A1	19960807	AU 1996-47497	19960105 <--
EP 804446	A1	19971105	EP 1996-903394	19960105 <--
R: DE, FR, GB, SE				
JP 10504974	T2	19980519	JP 1996-522303	19960105 <--
JP 3093275	B2	20001003		

PRIORITY APPLN. INFO.:

US 1995-374456 A 19950118 <--

WO 1996-US274 W 19960105 <--

AB A prepn. of a labeled nucleotide comprising at least one compd. having a Mg²⁺ assocn. const. between 1 .times. 10⁻¹¹ to 1 .times. 10⁻², inclusive, is claimed. The compd. is preferably selected from the group consisting of citrate, isocitrate, phosphate, EGTA, EDTA, and EDTA. The concn. of the compd. is preferably at least 5 mM.

IT 174817-56-2

RL: MSC (Miscellaneous)

(stabilization of labeled nucleoside triphosphates with magnesium-binding compds.)

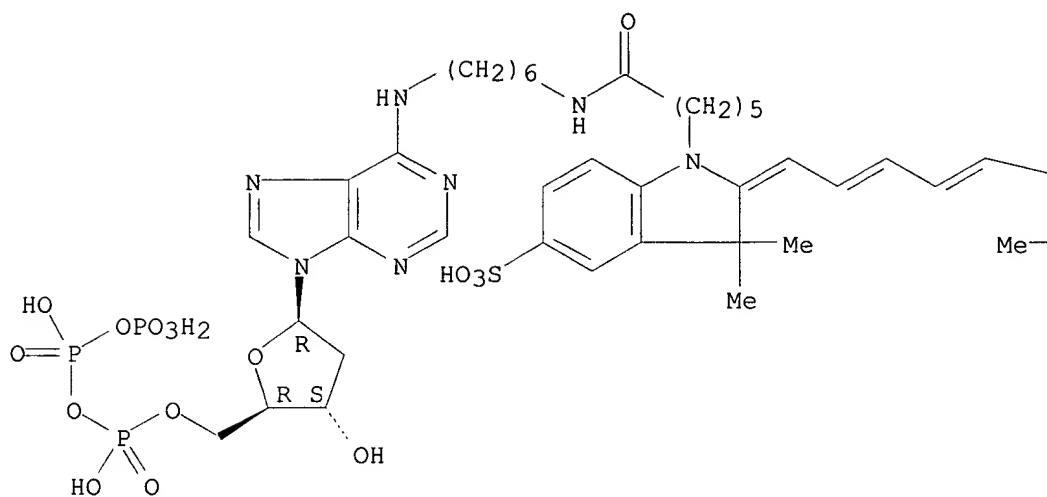
RN 174817-56-2 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[[6-[[9-[2-deoxy-5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-erythro-pentofuranosyl]-9H-purin-6-yl]amino]hexyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

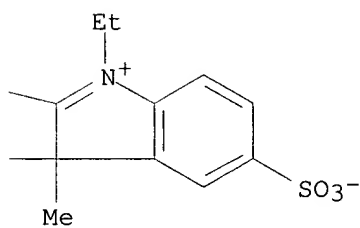
Absolute stereochemistry.

Double bond geometry unknown.

PAGE 1-A



PAGE 1-B



=> d ibib abs hitstr 24

L14 ANSWER 24 OF 26 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:126958 HCAPLUS

DOCUMENT NUMBER: 124:224660

TITLE: Characterization of fluorescent nucleoside triphosphates by capillary electrophoresis with laser-induced fluorescence detection: action of alkaline phosphatase and DNA polymerase

AUTHOR(S): Evangelista, Ramon A.; Liu, Ming-Sun; Rampal, Sushma; Chen, Fu-Tai A.

CORPORATE SOURCE: Advanced Technology Center, Beckman Instruments Inc., Fullerton, CA, 92634, USA

SOURCE: Analytical Biochemistry (1996), 235(1), 89-97

CODEN: ANBCA2; ISSN: 0003-2697

PUBLISHER: Academic

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A method of anal. of fluor-labeled nucleoside triphosphates based on alk. phosphatase-catalyzed sequential cleavage of phosphate groups with monitoring of all fluorescent species by capillary electrophoresis with laser-induced fluorescence detection is presented. The method allows detn. of the purity of the triphosphate samples as well as the relative amts. of the lower phosphate contaminants. The ability of one of the fluor-labeled nucleoside triphosphates to serve as polymerase substrate was verified by labeling DNA restriction fragments by the method of filling recessed 3'-ends using DNA polymerase Klenow fragment.

IT 174817-57-3

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(fluorescent nucleoside triphosphates anal. by capillary electrophoresis with laser-induced fluorescence and action of enzymes)

RN 174817-57-3 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[[6-[[1-[2-deoxy-5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-erythro-pentofuranosyl]-1,2-dihydro-2-oxo-4-pyrimidinyl]amino]hexyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

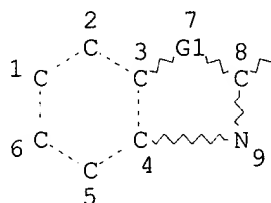
Double bond geometry unknown.

MAUPIN 09/829,467

=> d que 160

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 L4 514 SEA FILE=HCAPLUS ABB=ON PLU=ON SUDO Y?/AU
 L5 112 SEA FILE=HCAPLUS ABB=ON PLU=ON SESHIMOTO O?/AU
 L6 3873 SEA FILE=HCAPLUS ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4 OR L5)
 L7 70 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 AND FLUORESCEN?
 L8 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L7 AND NUCLEOTID?
 L9 89880 SEA FILE=HCAPLUS ABB=ON PLU=ON ?CYANIN? OR ?STYRYL?
 L10 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L8 AND L9
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 NUCLEIC)
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 L19 6154 SEA FILE=HCAPLUS ABB=ON PLU=ON "PHOSPHATES, BIOLOGICAL
 STUDIES"/CT
 L34 STR

appli-
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work
which
was
subtracted
from the
answer
set



Me~C~Me
10 @11 12

VAR G1=O/S/11
 REP G2=(2-9) C
 NODE ATTRIBUTES:
 CONNECT IS E3 RC AT 8
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

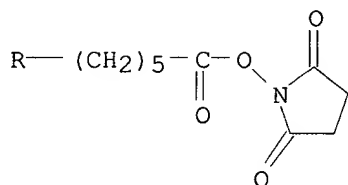
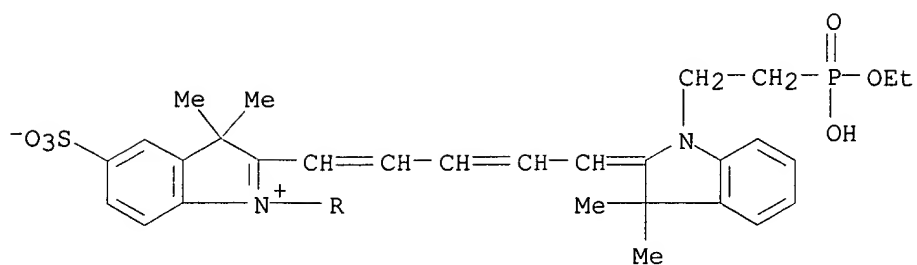
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 L39 4949 SEA FILE=REGISTRY ABB=ON PLU=ON L36 AND ?SULFON?/CNS
 L40 639 SEA FILE=REGISTRY ABB=ON PLU=ON L36 AND ?PHOSPH?/CNS
 L41 39918 SEA FILE=REGISTRY ABB=ON PLU=ON L36 NOT (L39 OR L40)

L42	561	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L41 AND OC4/ES
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L44	261	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L40
L45	219	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L42 ✓ DNA, ETC
L46	8330	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L16(3A) FLUORES?
L47	33	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L46 AND (L43 OR L44)
L48	9	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L47 AND ?CONJUGAT?
L49	24	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L47 NOT L48
L50	68099	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L15 OR ?CYANINE?
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L53	7	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(?SULFON? OR ?PHOSPH?) AND L51
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L56	1	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L55 AND L16
L58	2	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L16 AND L45
L59	2	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L58 OR L56
L60	17	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L48 OR L53 OR L59) NOT L12

17 cites

=> d ibib abs hitstr 160 1

L60 ANSWER 1 OF 17 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2001:787923 HCAPLUS
 DOCUMENT NUMBER: 136:398000
 TITLE: Single- and dual- near-infrared **fluorescent**
 labeled **nucleic acid conjugate** for
 nucleic acid detection
 AUTHOR(S): Lin, Zhihong; Wu, Meng; Ren, Shu; Arbter, Michaela;
 Boehmer, Martin; Mirsky, Vladimir; Wolfbeis, Otto S.
 CORPORATE SOURCE: Department of Chemistry, Tongji Medical College,
 Huazhong University of Science and Technology, Wuhan,
 Hubei, 430030, Peop. Rep. China
 SOURCE: Proceedings of SPIE-The International Society for
 Optical Engineering (2001), 4414(International
 Conference on Sensor Technology (ISTC 2001), 2001),
 111-114
 CODEN: PSISDG; ISSN: 0277-786X
 PUBLISHER: SPIE-The International Society for Optical Engineering
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB In this research, a near-IR **fluorescent** labeled **nucleic**
 acid **conjugate** for the nucleic acid detection was synthesized,
 and characterized preliminarily for the detection of the nucleic acid.
 The **conjugate** combines the mol. recognition properties of the
 oligonucleotides with the near-IR fluorescence label PR 646. Both single-
 and dual- labeled **conjugates** were studied for their
 hybridization with the complementary nucleic acid. The dual labeled
conjugate has indicated that the self-quenching effect exists in
 ssDNA form while the fluorescence increases greatly after hybridization
 with the complementary nucleic acids. The time-resolved fluorescence was
 also studied.
 IT **429681-54-9**, PR 646
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (single- and dual- near-IR **fluorescent** labeled
nucleic acid conjugate for nucleic acid detection)
 RN 429681-54-9 HCAPLUS
 CN 3H-Indolium, 1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-2-[5-[1-[2-
 (ethoxyhydroxyphosphinyl)ethyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-
 ylidene]-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA
 INDEX NAME)



REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 160 2

L60 ANSWER 2 OF 17 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:507799 HCAPLUS

DOCUMENT NUMBER: 135:93921

TITLE: Mobility-modifying **cyanine** dyes

INVENTOR(S): Menchen, Steven M.; Benson, Scott C.; Rosenblum, Barnett B.; Khan, Shaheer H.

PATENT ASSIGNEE(S): PE Corporation, USA

SOURCE: PCT Int. Appl., 133 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001049790	A2	20010712	WO 2001-US152	20010103
WO 2001049790	A3	20011206		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-477270 A 20000104

OTHER SOURCE(S): MARPAT 135:93921

AB The present invention provides a novel class of fluorescent **cyanine** dye compds. that are modified at one of the heterocyclic ring nitrogen atoms with a mobility-modifying moiety that permits the electrophoretic mobilities of polynucleotides labeled with the mobility-modifying **cyanine** dyes to be adjusted or tuned in a predictable fashion while retaining enzymic activity. The ability to predictably tune the relative electrophoretic mobilities of the dyes permits the creation of sets of mobility-matched fluorescent dyes of a variety of structures for a variety of applications, including fluorescence-based 4-color **nucleic** acid sequencing reactions.

IT 349491-68-5P 349491-69-6P 349491-73-2P

349491-74-3P 349491-76-5P 349491-78-7P

RL: ARG (Analytical reagent use); IMF (Industrial manufacture); TEM (Technical or engineered material use); ANST (Analytical study); PREP (Preparation); USES (Uses)

(mobility-modifying **fluorescent cyanine** dyes for **nucleic** acid sequencing reactions)

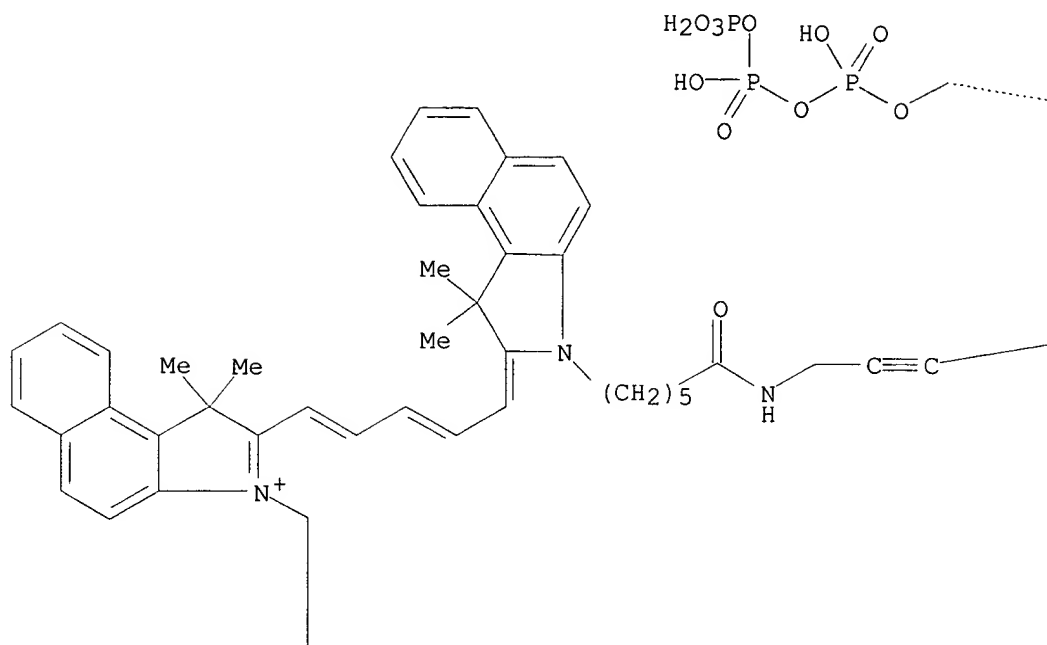
RN 349491-68-5 HCAPLUS

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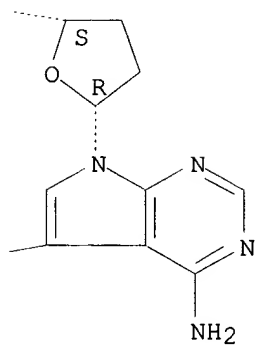
Absolute stereochemistry.

Double bond geometry unknown.

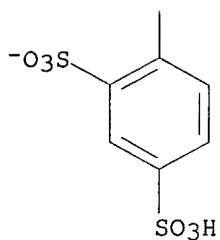
PAGE 1-A



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PAGE 2-A

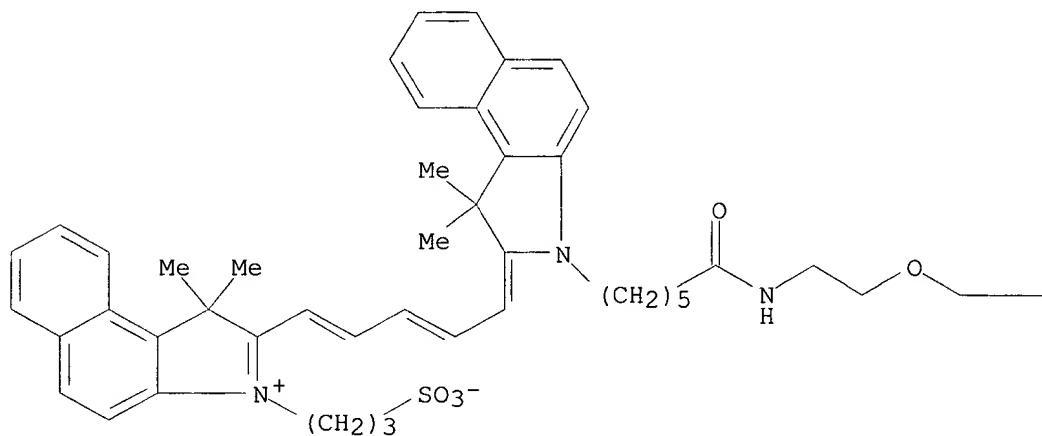


RN 349491-69-6 HCAPLUS

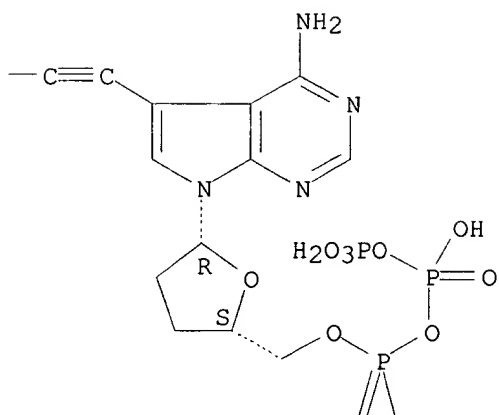
CN 1H-Benz[e]indolium, 2-[5-[3-[6-[[2-[[3-[4-amino-7-[(2R,5S)-tetrahydro-5-(3,5,7,7-tetrahydroxy-3,5,7-trioxido-2,4,6-trioxa-3,5,7-triphosphahept-1-yl)-2-furanyl]-7H-pyrrolo[2,3-d]pyrimidin-5-yl]-2-propynyl]oxy]ethyl]amino]-6-oxohexyl]-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene]-1,3-pentadienyl]-1,1-dimethyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

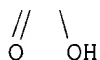
PAGE 1-A



PAGE 1-B



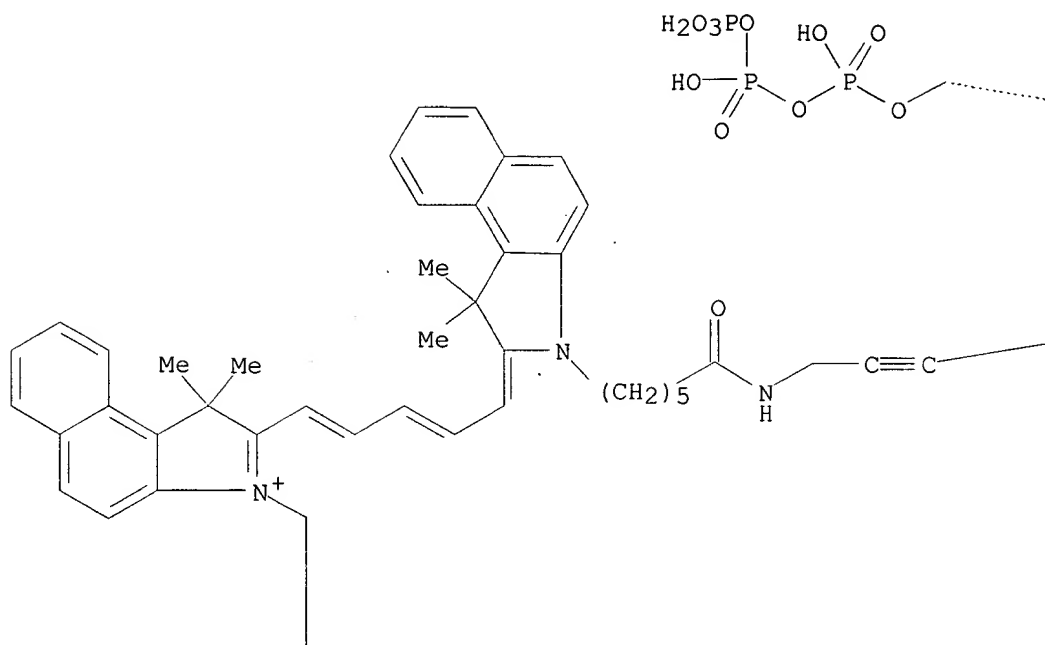
PAGE 2-B



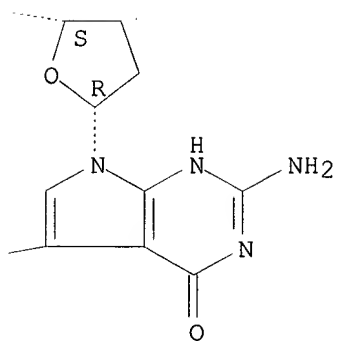
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 CN 1H-Benz[e]indolium, 2-[5-[3-[6-[[3-[2-amino-4,7-dihydro-4-oxo-7-[(2R,5S)-tetrahydro-5-(3,5,7,7-tetrahydroxy-3,5,7-trioxido-2,4,6-trioxa-3,5,7-triphosphahept-1-yl)-2-furanyl]-1H-pyrrolo[2,3-d]pyrimidin-5-yl]-2-propynyl]amino]-6-oxohexyl]-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene]-1,3-pentadienyl]-3-[(2,4-disulfophenyl)methyl]-1,1-dimethyl-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.

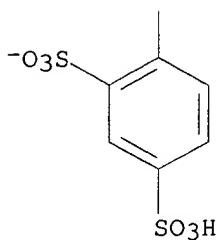
PAGE 1-A



PAGE 1-B



PAGE 2-A

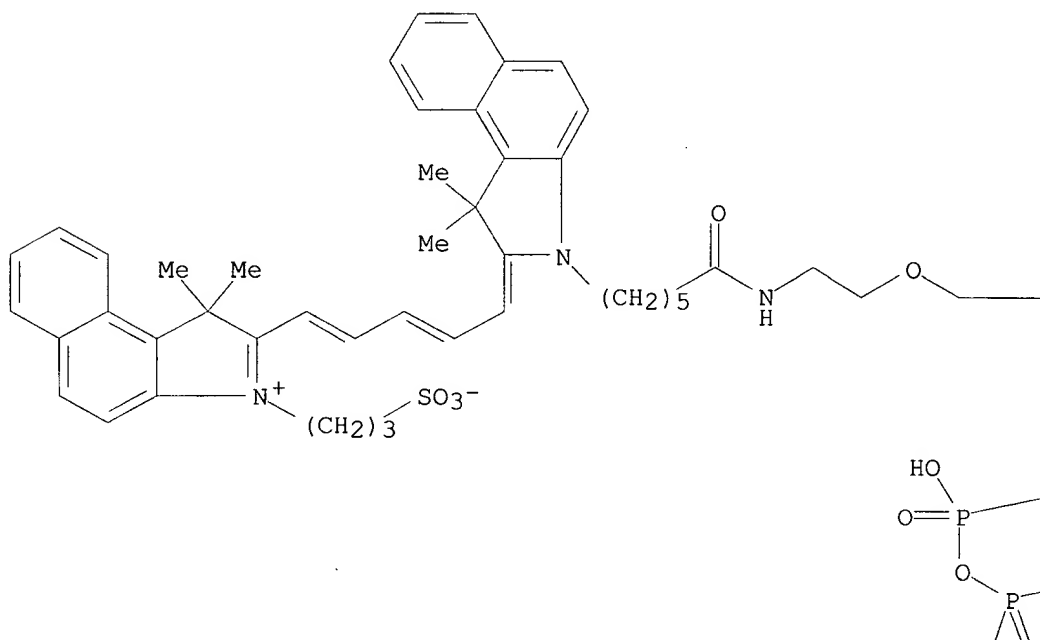


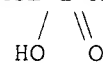
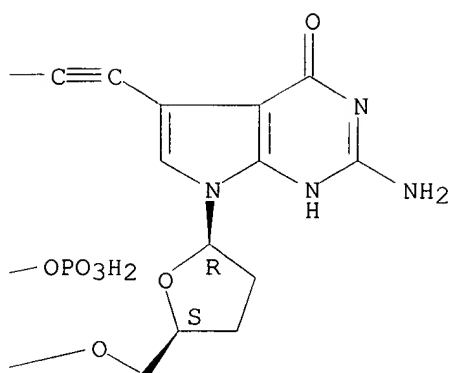
RN 349491-74-3 HCAPLUS

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[(2R,5S)-tetrahydro-5-(3,5,7,7-tetrahydroxy-3,5,7-trioxido-2,4,6-trioxa-
3,5,7-triphosphahept-1-yl)-2-furanyl]-1H-pyrrolo[2,3-d]pyrimidin-5-yl]-2-
propynyl]oxy]ethyl]amino]-6-oxohexyl]-1,3-dihydro-1,1-dimethyl-2H-
benz[e]indol-2-ylidene]-1,3-pentadienyl]-1,1-dimethyl-3-(3-sulfopropyl)-,
inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A

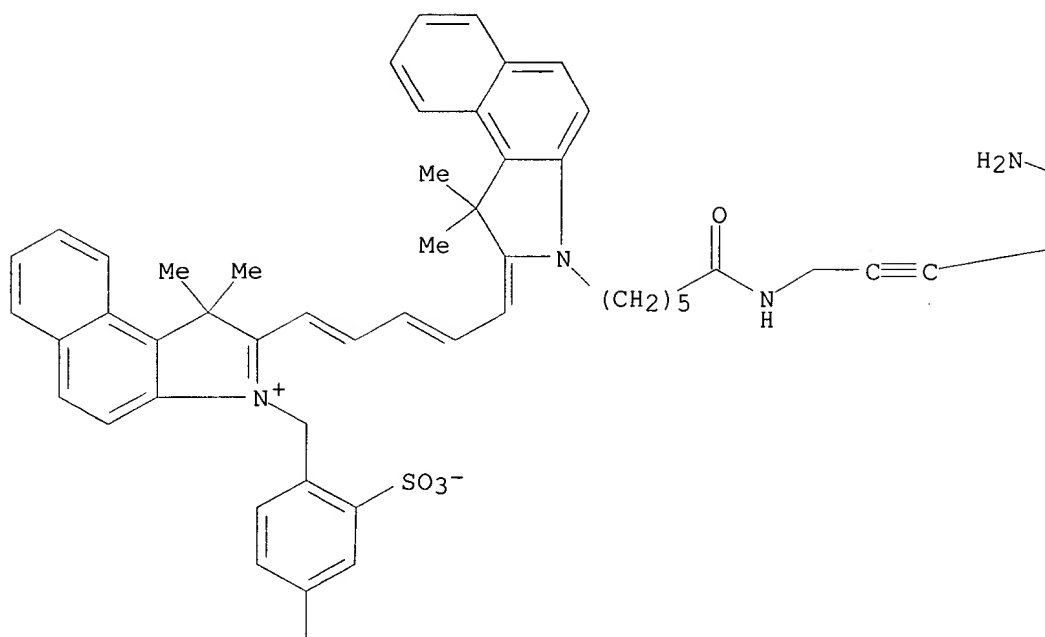




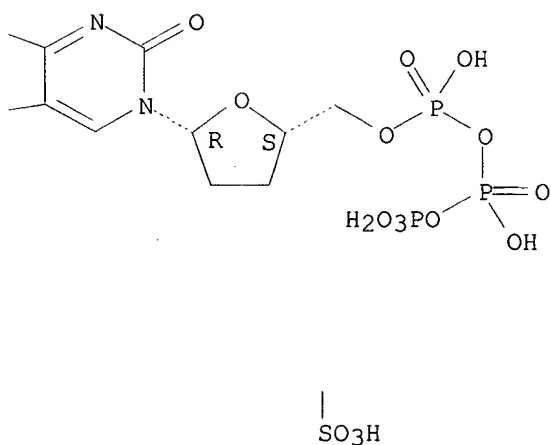
RN 349491-76-5 HCAPLUS
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 (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.

PAGE 1-A



PAGE 1-B



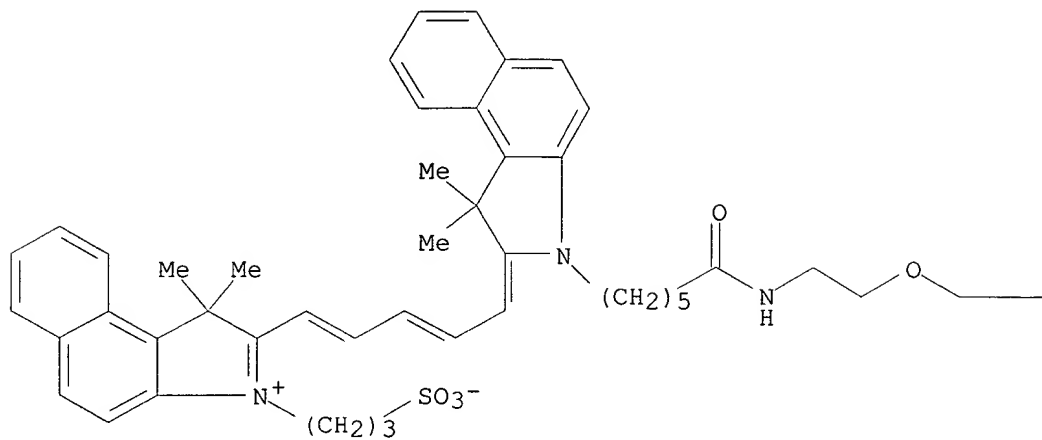
PAGE 2-A

RN 349491-78-7 HCAPLUS
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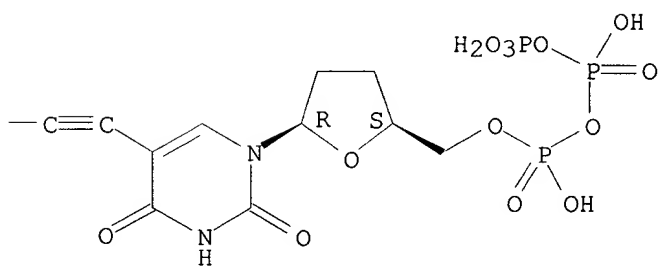
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



PAGE 1-B



=> d ibib abs hitstr 160 3

L60 ANSWER 3 OF 17 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:440613 HCAPLUS

DOCUMENT NUMBER: 136:145683

TITLE: Novel fluorescent nonnucleoside **triphosphates** as terminators of enzyme-directed DNA synthesis

AUTHOR(S): Roemer, Stephen C.; Johnson, Craig M.; Boveia, Vince R.; Buzby, Philip R.; DiMeo, James J.; Draney, Dan; Narayanan, Narasimhachari; Olive, D. Michael

CORPORATE SOURCE: Orchid BioSciences, Inc., Princeton, NJ, USA

SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (2001), 4264 (Genomics and Proteomics Technologies), 1-8
CODEN: PSISDG; ISSN: 0277-786X

PUBLISHER: SPIE-The International Society for Optical Engineering

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Near IR (NIR) fluorescent acycloterminators were tested as substrates in the Sanger enzymic method of DNA sequencing. The acyclic **triphosphates** of adenosine, uridine, guanosine, and cytidine (AcyNTP) were labeled with a heptamethine **carbocyanine** dye via a propargylamino linker to the purine or pyrimidine base. Dye-labeled AcyNTPs which are lacking in the sugar moiety positions equiv. to the C-2 and C-3 of the ribose functioned similarly to chain-terminating dideoxynucleotides (ddNTPs). These **fluorescent nonnucleotide** analogs were incorporated by a mutant, thermostable Taq DNA polymerase with the same efficacy and fidelity as traditional ddNTPs. Sequence read length and base-calling accuracy were comparable for both dye-acycloterminator and dye-primer sequencing methods. In two primer walking projects, cycle sequencing with fluorescent AcyNTPs achieved a mean sequence read length of 1,090 bases with 99.1% accuracy at one kilobase read length. The **cyanine** dye-labeled acycloterminators produced electropherograms in which weak T peaks follow G peaks. In cases of polymorphism, such peak height variability may make it difficult to distinguish the presence or absence of a heterozygote at a specific site.

IT 395645-36-0 395645-37-1 395645-38-2

395645-39-3

RL: ARG (Analytical reagent use); BSU (Biological study, unclassified);

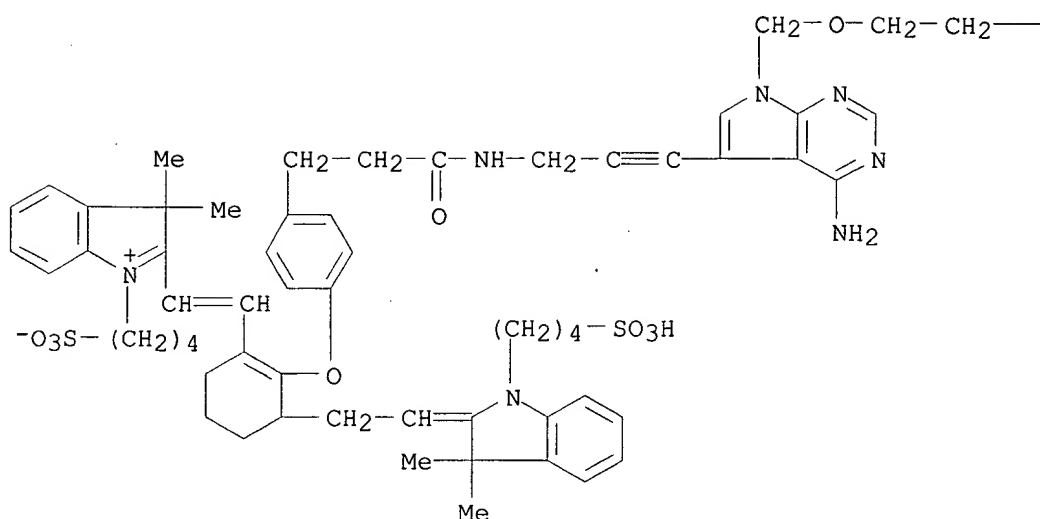
ANST (Analytical study); BIOL (Biological study); USES (Uses)

(novel fluorescent nonnucleoside **triphosphates** as terminators of enzyme-directed DNA synthesis)

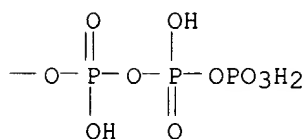
RN 395645-36-0 HCAPLUS

CN 3H-Indolium, 2-[2-[2-[4-{3-[[3-[4-amino-7-(6,8,10,10-tetrahydroxy-6,8,10-trioxido-2,5,7,9-tetraoxa-6,8,10-triphosphadec-1-yl)-7H-pyrrolo[2,3-d]pyrimidin-5-yl]-2-propynyl]amino]-3-oxopropyl]phenoxy]-3-[2-[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethyl]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



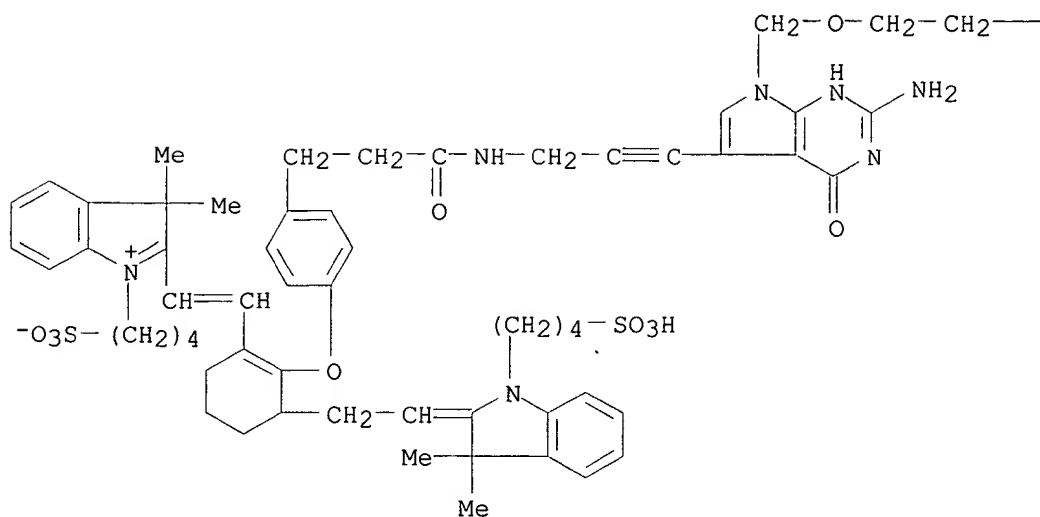
PAGE 1-B



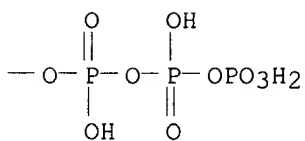
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RN 395645-37-1 HCAPLUS
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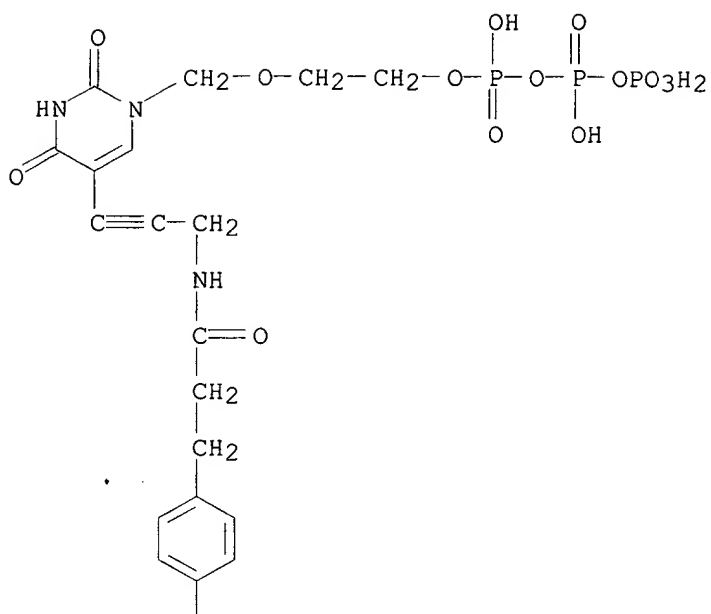
PAGE 1-B



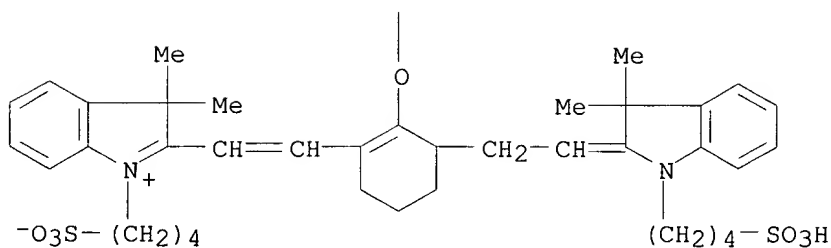
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RN 395645-38-2 HCAPLUS
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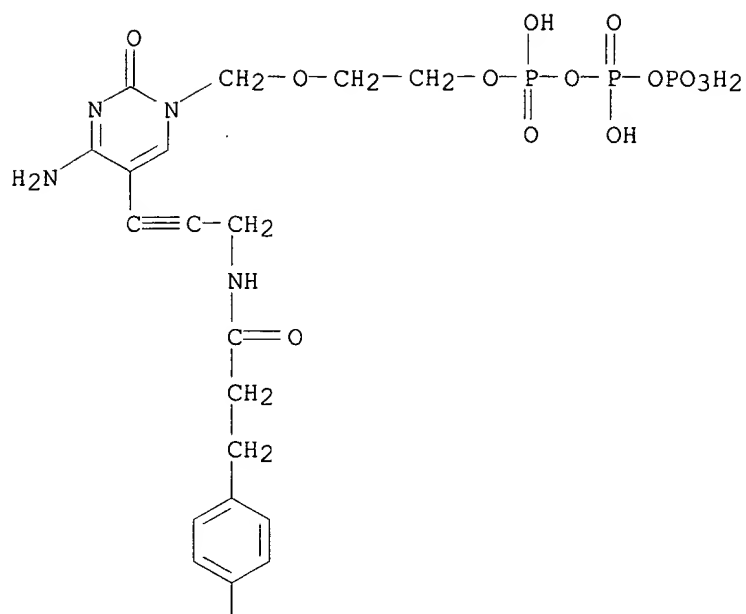


● Na

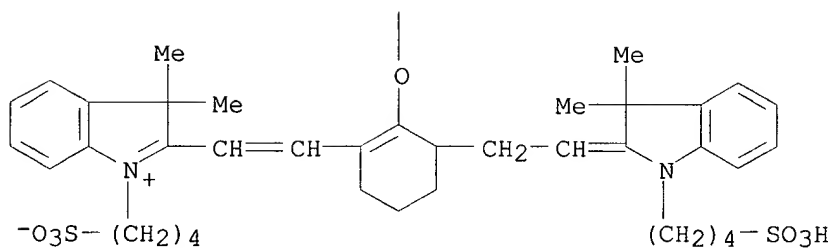
RN 395645-39-3 HCAPLUS

CN 3H-Indolium, 2-[2-[2-[4-[3-[3-[4-amino-1,2-dihydro-2-oxo-1-(6,8,10,10-tetrahydroxy-6,8,10-trioxido-2,5,7,9-tetraoxa-6,8,10-triphosphadec-1-yl)-5-pyrimidinyl]-2-propynyl]amino]-3-oxopropyl]phenoxy]-3-[2-[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethyl]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

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● Na

REFERENCE COUNT:

25

THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 160 4

L60 ANSWER 4 OF 17 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:310508 HCAPLUS

DOCUMENT NUMBER: 134:323136

TITLE: Cyanine dyes as labeling reagents for detection of biological and other materials by luminescence methods

INVENTOR(S): Waggoner, Alan S.

PATENT ASSIGNEE(S): Carnegie Mellon University, USA

SOURCE: U.S., 20 pp., Cont.-in-part of U.S. 5,627,027.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6225050	B1	20010501	US 1996-745712	19961112
US 5268486	A	19931207	US 1992-884636	19920515
US 5627027	A	19970506	US 1992-831759	19920922
US 5486616	A	19960123	US 1993-158952	19931129
US 5569766	A	19961029	US 1993-158953	19931129
US 5569587	A	19961029	US 1995-424219	19950419
US 6048982	A	20000411	US 1997-873470	19970612
PRIORITY APPLN. INFO.:			US 1986-854347	B1 19860418
			US 1992-831759	A2 19920922
			US 1988-240756	B1 19880902
			US 1992-882802	B1 19920514
			US 1992-884636	A3 19920515
			US 1996-745712	A3 19961112

OTHER SOURCE(S): MARPAT 134:323136

AB Cyanine and related dyes, such as merocyanine, styryl and oxonol dyes, are strongly light-absorbing and highly luminescent. Cyanine and related dyes having functional groups to make them reactive with amine, hydroxy and sulfhydryl groups are covalently attached to proteins, nucleic acids, carbohydrates, sugars, cells and combinations thereof, and other biol. and nonbiol. materials, to make these materials fluorescent so that they can be detected. The labeled materials can then be used in assays employing excitation light sources and luminescence detectors. For example, fluorescent cyanine and related dyes can be attached to amine, hydroxy or sulfhydryl groups of avidin and to antibodies and to lectins. Thereupon, avidin labeled with cyanine type dyes can be used to quantify biotinylated materials and antibodies **conjugated** with cyanine-type dyes can be used to detect and measure antigens and haptens. In addn., cyanine-**conjugated** lectins can be used to detect specific carbohydrate groups. Also, cyanine-**conjugated** fragments of DNA or RNA can be used to identify the presence of complementary nucleotide sequences in DNA or RNA.

IT 336850-25-ODP, nucleotide conjugate

336850-27-2DP, nucleotide conjugate

RL: NUU (Other use, unclassified); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

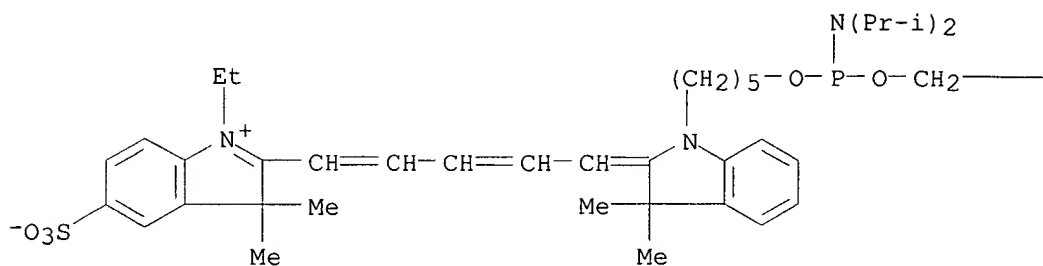
(as **fluorescent** primer; cyanine dyes as labeling reagents for detection of biol. and other materials by luminescence methods)

RN 336850-25-0 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[5-[[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]oxy]pentyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI)

(CA INDEX NAME)

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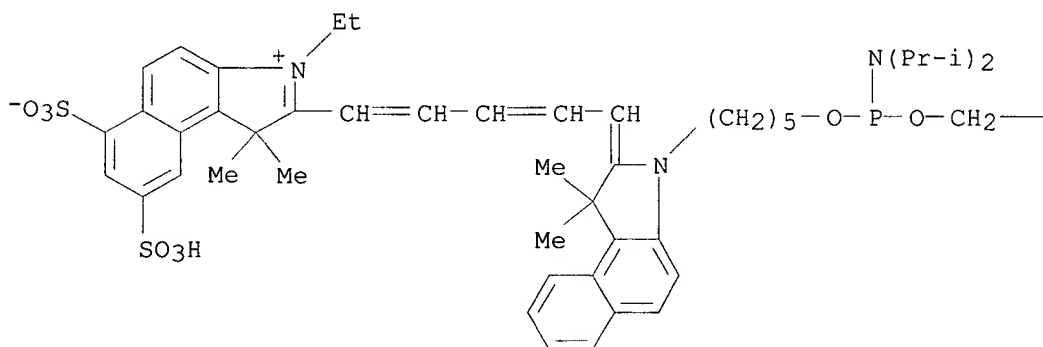
PAGE 1-B

—CH₂—CN

RN 336850-27-2 HCAPLUS

CN 1H-Benz[e]indolium, 2-[5-[3-[5-[[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]oxy]pentyl]-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene]-1,3-pentadienyl]-3-ethyl-1,1-dimethyl-6,8-disulfo-, inner salt, potassium salt (9CI) (CA INDEX NAME)

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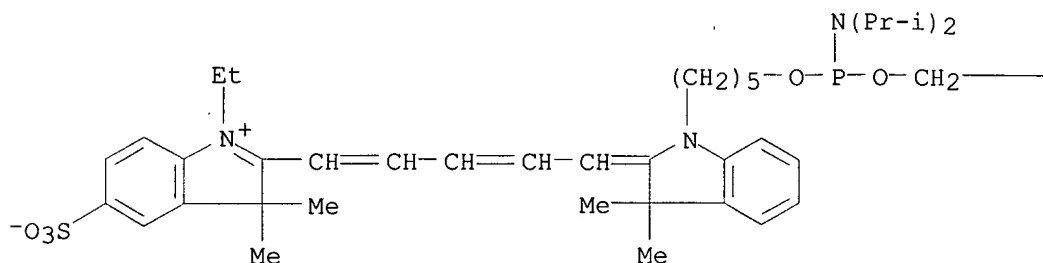
● K

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—CH₂—CN

IT 336850-25-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (as reactive dye; cyanine dyes as labeling reagents for detection of biol. and other materials by luminescence methods)
 RN 336850-25-0 HCAPLUS
 CN 3H-Indolium, 2-[5-[1-[5-[[[bis(1-methylethyl)amino] (2-cyanoethoxy)phosphino]oxy]pentyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI)
 (CA INDEX NAME)

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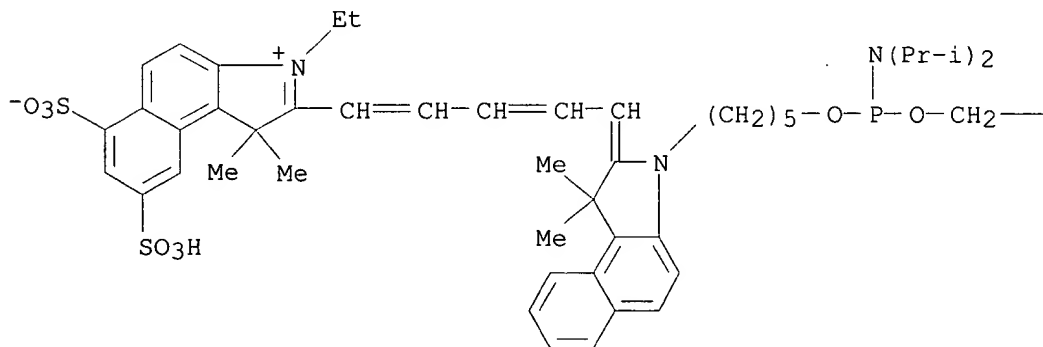


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—CH₂—CN

IT 336850-30-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (cyanine dyes as labeling reagents for detection of biol. and other materials by luminescence methods)
 RN 336850-30-7 HCAPLUS
 CN 1H-Benz[e]indolium, 2-[5-[3-[5-[[[bis(1-methylethyl)amino] (2-cyanoethoxy)phosphino]oxy]pentyl]-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene]-1,3-pentadienyl]-3-ethyl-1,1-dimethyl-6,8-disulfo-, inner salt (9CI) (CA INDEX NAME)

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—CH₂—CN

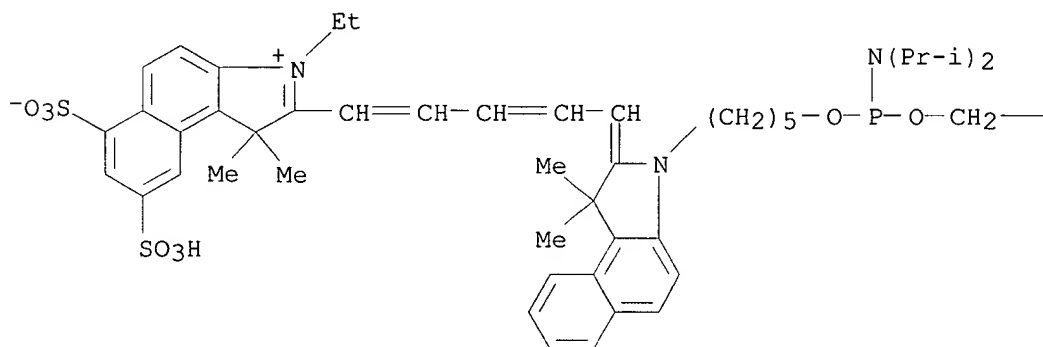
IT 336850-27-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(cyanine dyes as labeling reagents for detection of biol. and other materials by luminescence methods)

RN 336850-27-2 HCAPLUS

CN 1H-Benz[e]indolium, 2-[5-[3-[5-[[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]oxy]pentyl]-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene]-1,3-pentadienyl]-3-ethyl-1,1-dimethyl-6,8-disulfo-, inner salt, potassium salt (9CI) (CA INDEX NAME)

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● K

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—CH₂—CN

REFERENCE COUNT:

19

THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 160 5

L60 ANSWER 5 OF 17 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2001:178461 HCAPLUS
 DOCUMENT NUMBER: 134:217985
 TITLE: Method for 3' end-labeling ribonucleic acids
 INVENTOR(S): Ach, Robert A.
 PATENT ASSIGNEE(S): Agilent Technologies Inc., USA
 SOURCE: U.S., 8 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6201112	B1	20010313	US 1999-359564	19990722
US 2001009762	A1	20010726	US 2001-802358	20010309

PRIORITY APPLN. INFO.: US 1999-359564 A3 19990722

AB Methods of end-labeling ribonucleic acids with non-radioactively labeled **ribonucleotides**, and particularly **fluorescently** labeled **ribonucleotides**, are provided. In the subject methods, a RNA is contacted with a non-radioactively labeled ribonucleotide in the presence of a prokaryotic, usually bacterial, poly(A) polymerase under conditions sufficient for covalent bonding of the labeled ribonucleotide to the 3' end of the RNA to occur. Also provided are kits for practicing the subject method. The subject methods and kits find use in a variety of applications where labeling of the 3' end of a RNA with a non-radioactive label, particularly a fluorescent label, is desired.

IT **329320-43-6**

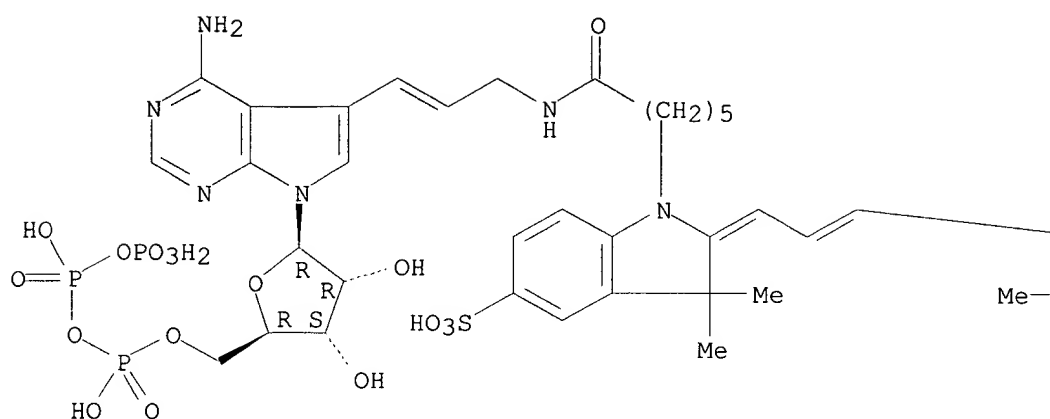
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (method for 3' end-labeling ribonucleic acids)

RN 329320-43-6 HCAPLUS

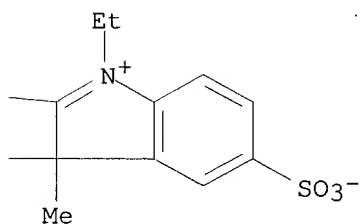
CN 3H-Indolium, 2-[3-[1-[6-[[3-[4-amino-7-[5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-ribofuranosyl]-7H-pyrrolo[2,3-d]pyrimidin-5-yl]-2-propenyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT:

13

THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 160 6

L60 ANSWER 6 OF 17 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:93900 HCAPLUS

DOCUMENT NUMBER: 134:164473

TITLE: **Acylsulfonamido**-substituted polymethine
fluorescent dyes and their use as fluorescent coloring
materials and/or markers for biomolecules

INVENTOR(S): Deroover, Geert; Missfeldt, Michael; Simon, Lydia

PATENT ASSIGNEE(S): Bayer A.-G., Germany

SOURCE: Ger. Offen., 68 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19937024	A1	20010208	DE 1999-19937024	19990805
WO 2001011370	A1	20010215	WO 2000-EP7070	20000724
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1206703	A1	20020522	EP 2000-958289	20000724
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
PRIORITY APPLN. INFO.:			DE 1999-19937024 A	19990805
			WO 2000-EP7070 W	20000724

OTHER SOURCE(S): MARPAT 134:164473

AB Polymethine dyes contg. (1) at least one **acylsulfonamido** group of the formula (CH₂)_nYNHAR, where A and Y are electron-donating groups such as CO or SO₂, R = optionally substituted alkyl or aryl, and n = 1-9 and (2) and at least one other functional group are effective as fluorescent coloring materials or markers for biomols. The polymethine dyes have improved light stability compared to prior-art indole or squaric acid-based materials when used with RNA, DNA, or proteins. Examples of prepn. of 2 dyes were given.

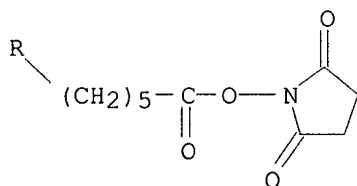
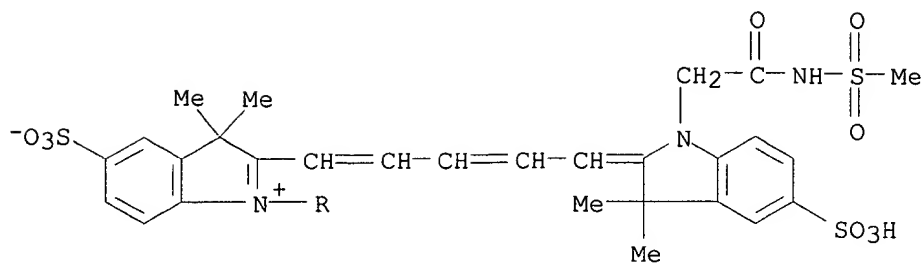
IT **324745-35-9 324745-37-1**

RL: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)

(acylsulfonamido-substituted polymethine fluorescent dye markers for biomols.)

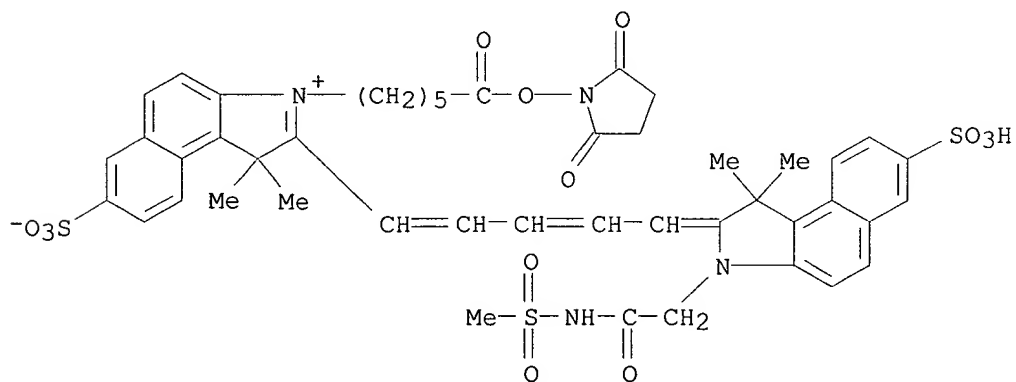
RN 324745-35-9 HCAPLUS

CN 3H-Indolium, 2-[5-[1,3-dihydro-3,3-dimethyl-1-[2-[(methylsulfonyl)amino]-2-oxoethyl]-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-3,3-dimethyl-5-sulfo-, inner salt, monopotassium salt (9CI) (CA INDEX NAME)



● K

RN 324745-37-1 HCAPLUS
 CN 1H-Benz[e]indolium, 2-[5-[1,3-dihydro-1,1-dimethyl-3-[2-
 [(methylsulfonyl)amino]-2-oxoethyl]-7-sulfo-2H-benz[e]indol-2-ylidene]-1,3-
 pentadienyl]-3-[6-[(2,5-dioxo-1-pyrrolidinyloxy)-6-oxohexyl]-1,1-dimethyl-
 7-sulfo-, inner salt, monopotassium salt (9CI) (CA INDEX NAME)



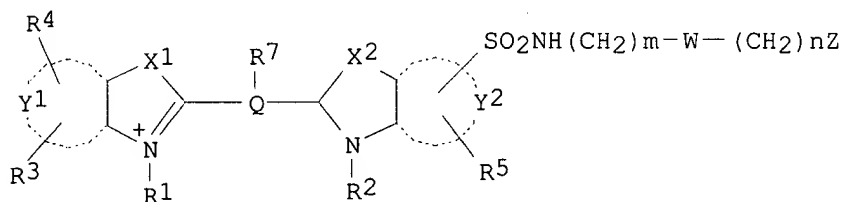
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=> d ibib abs hitstr 160 7

L60 ANSWER 7 OF 17 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2001:10685 HCAPLUS
 DOCUMENT NUMBER: 134:102214
 TITLE: New fluorescent cyanine labels containing a
 sulfonamido linker arm
 INVENTOR(S): Caputo, Giuseppe; Della, Ciana Leopoldo
 PATENT ASSIGNEE(S): Innosense S.r.L., Italy
 SOURCE: Eur. Pat. Appl., 94 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1065250	A1	20010103	EP 1999-112696	19990702
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 2000005843	A	20020102	BR 2000-5843	20000703
PRIORITY APPLN. INFO.:			EP 1999-112696	A 19990702
OTHER SOURCE(S):	MARPAT 134:102214			

GI



I

AB Water-sol. fluorescent cyanine dyes, capable of being excited by inexpensive light-emitting diodes or diode lasers and of **conjugating** with a wide variety of biomols., have the structure I [Q = **conjugated** connecting group; R1, R2 = H, C1-4 (sulfo)alkyl; R3-R5 = H, SO₃H, C1-4 sulfoalkyl, SO₂NH(CH₂)_mW(CH₂)_nZ; W = direct link, SO₂NH, O, CO₂, CONH; X1, X2 = O, S, CMe₂, C:CH₂; Y1, Y2 = benzo, naphtho; Z is or contains a functional group capable of bonding to biomols.; m, n = 0-12; m + n = 1-12] or its salt. Thus, K 2,3,3-trimethyl-3H-indole-5-sulfonate was converted with PCl₅ and POCl₃ to the 5-sulfonyl chloride, which was condensed with glycine tert-Bu ester, and the product was alkylated with 1,4-butane sultone to give 5-[[[(carboxymethyl)amino]sulfonyl]-2,3,3-trimethyl-1-(4-sulfoethyl)-3H-indolium inner salt (II). 2,3,3-Trimethyl-5-sulfo-1-(4-sulfoethyl)-3H-indolium inner salt was treated first with PhNHCH:NPh and then with II to give a I [Q = CH:CHCH:, R1 = R2 = (CH₂)₄SO₃H; R3 = 5-SO₃H, R4 = R5 = H, W = direct link, X1 = X2 = CMe₂, Y1 = Y2 = benzo, Z = CO₂H, m = 0, n = 1].

IT 316829-76-2P 316829-77-3P 316829-78-4P
 316829-79-5P 316829-80-8P 316829-81-9P
 316829-82-0P 316829-83-1P 316829-84-2P
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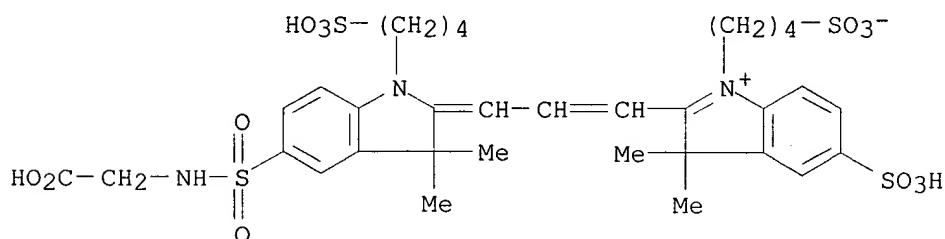
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RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST
 (Analytical study); PREP (Preparation); USES (Uses)

(prepn. of fluorescent cyanine dye labels contg. a sulfonamido linker
 arm)

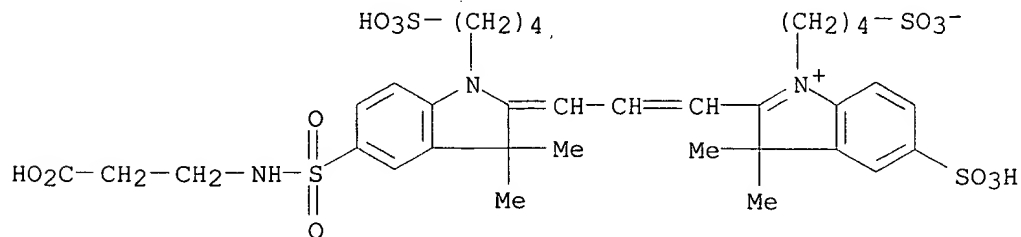
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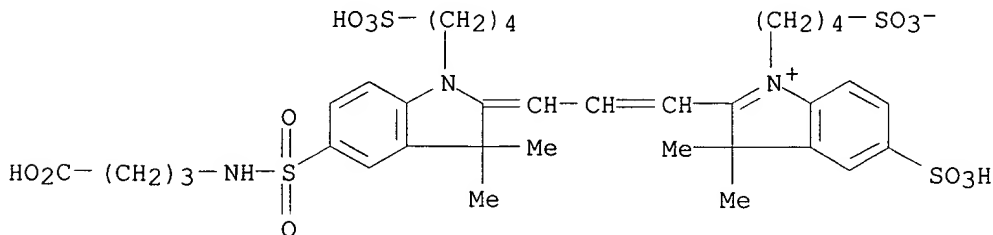
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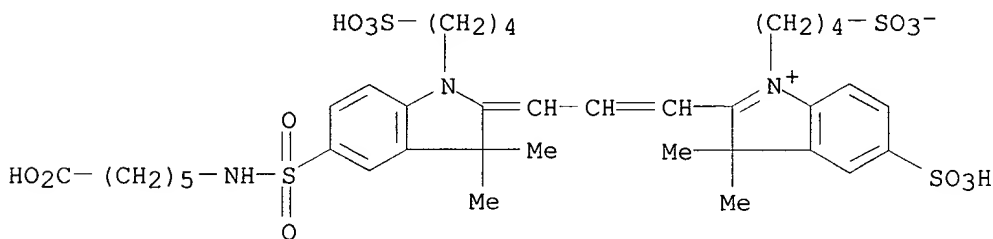
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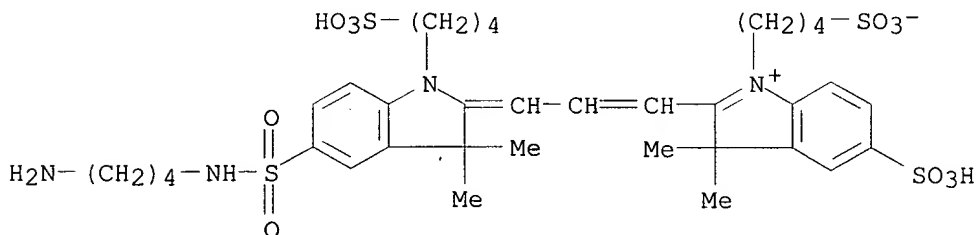
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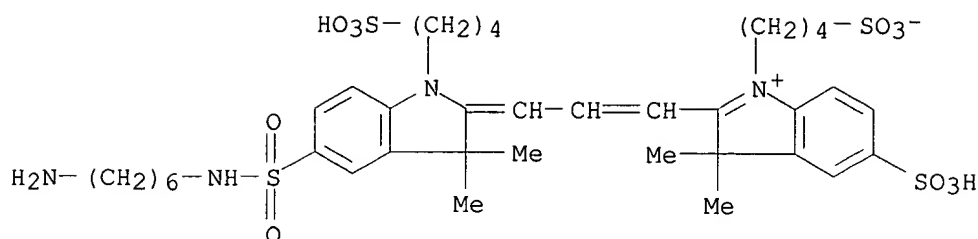
RN 316829-80-8 HCAPLUS

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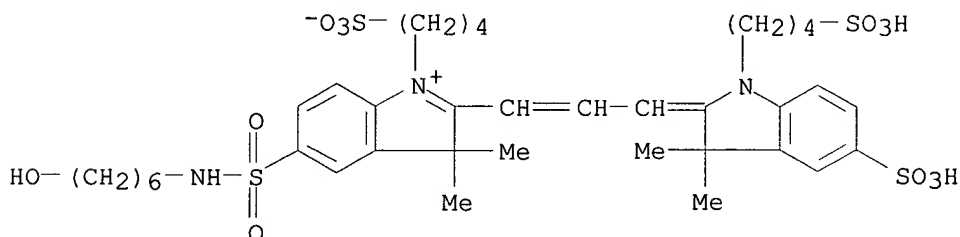


RN 316829-81-9 HCAPLUS

CN 3H-Indolium, 2-[3-[5-[[(6-aminohexyl) amino] sulfonyl]-1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1-propenyl]-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

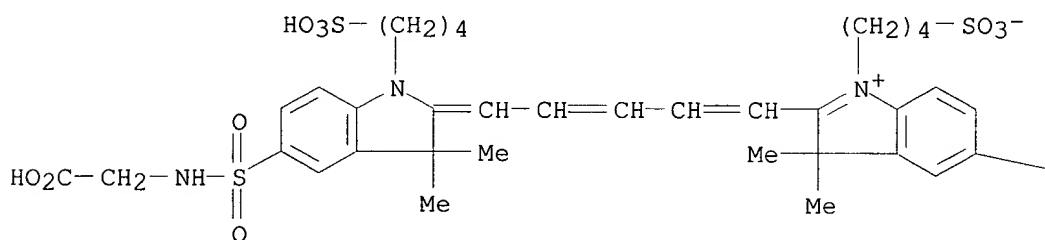


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RN 316829-83-1 HCAPLUS
 CN 3H-Indolium, 2-[5-[5-[[[(carboxymethyl)amino]sulfonyl]-1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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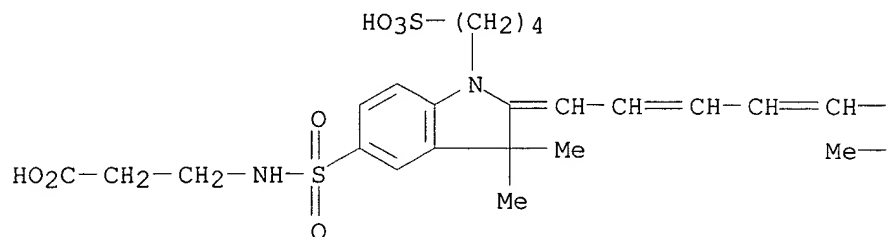
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 SO_3H

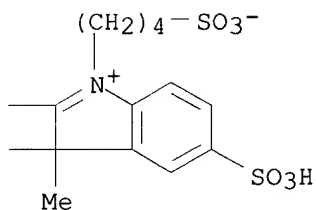
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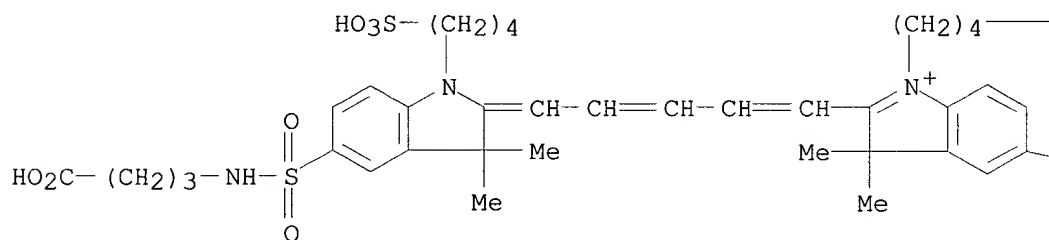


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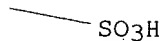
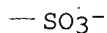


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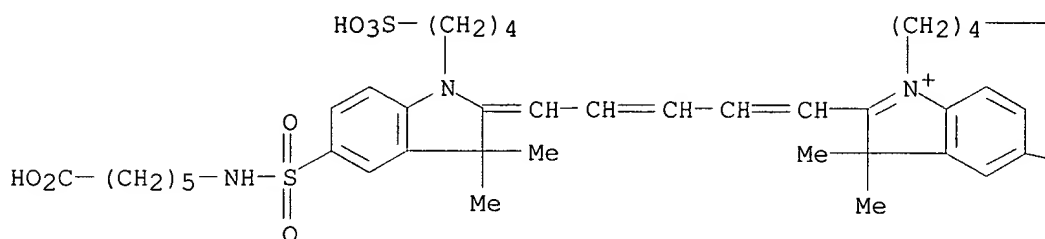
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RN 316829-86-4 HCAPLUS
CN 3H-Indolium, 2-[5-[5-[[(5-carboxypentyl) amino] sulfonyl]-1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-3,3-

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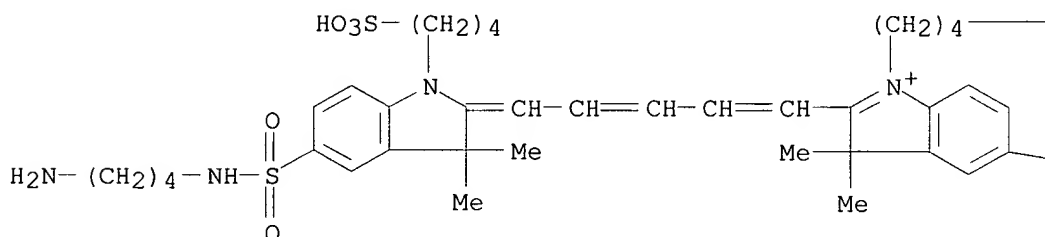
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—SO₃⁻

—SO₃H

RN 316829-87-5 HCAPLUS
 CN 3H-Indolium, 2-[5-[5-[[4-(aminobutyl)amino]sulfonyl]-1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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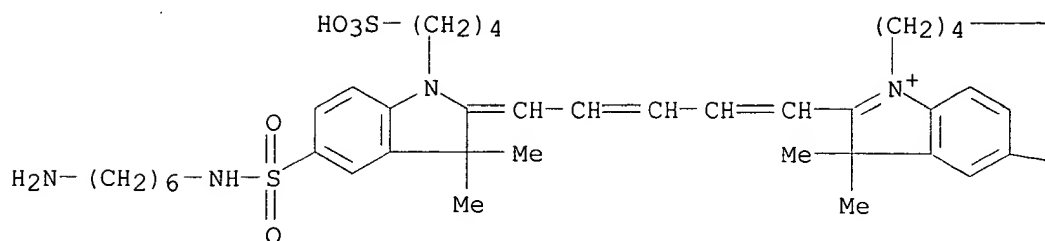
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—SO₃⁻

—SO₃H

RN 316829-88-6 HCAPLUS
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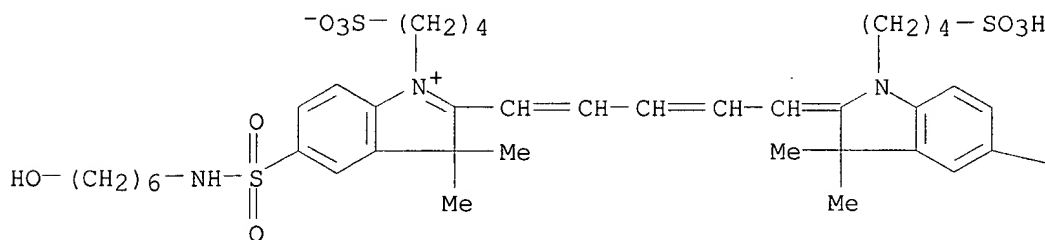
—SO₃⁻

—SO₃H

RN 316829-89-7 HCAPLUS

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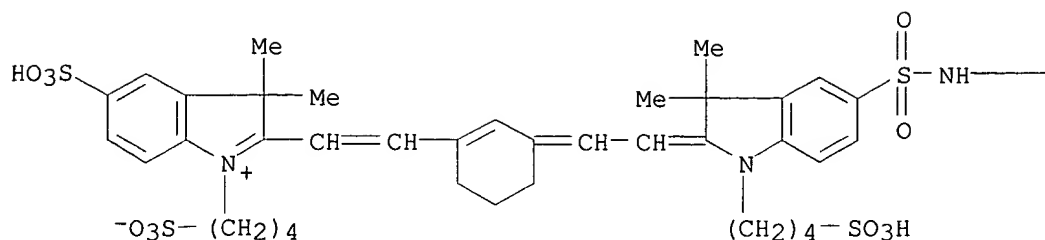
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—SO₃H

RN 316829-90-0 HCAPLUS

CN 3H-Indolium, 2-[2-[3-[[5-[[(carboxymethyl) amino]sulfonyl]-1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylenyl]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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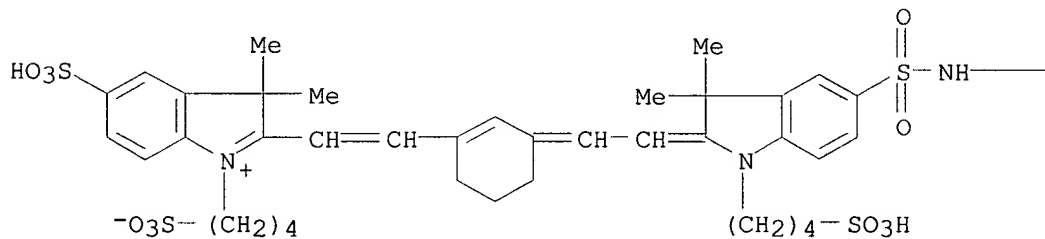


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—CH₂—CO₂H

RN 316829-91-1 HCAPLUS
 CN 3H-Indolium, 2-[2-[3-[[5-[[[(2-carboxyethyl)amino]sulfonyl]-1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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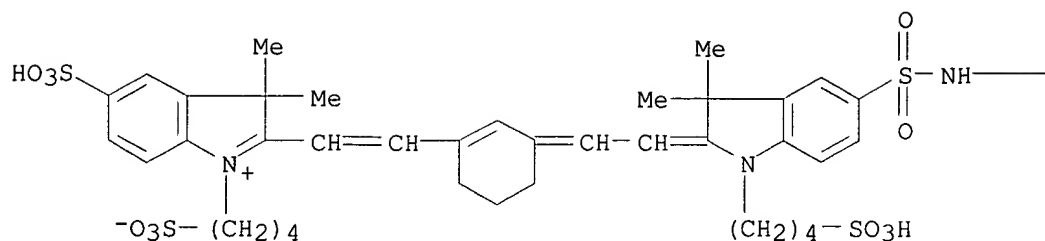


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—CH₂—CH₂—CO₂H

RN 316829-92-2 HCAPLUS
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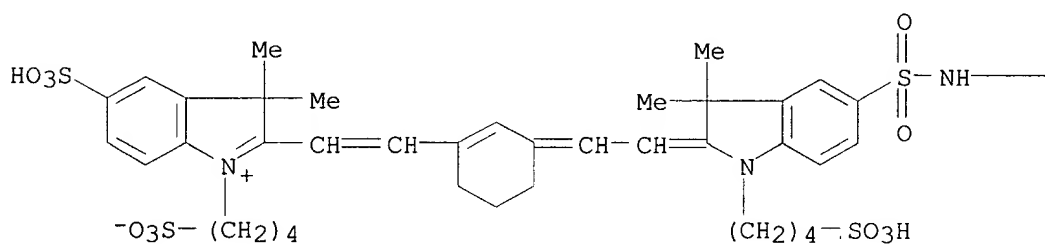
PAGE 1-B

— (CH₂)₃—CO₂H

RN 316829-93-3 HCAPLUS

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(CA INDEX NAME)

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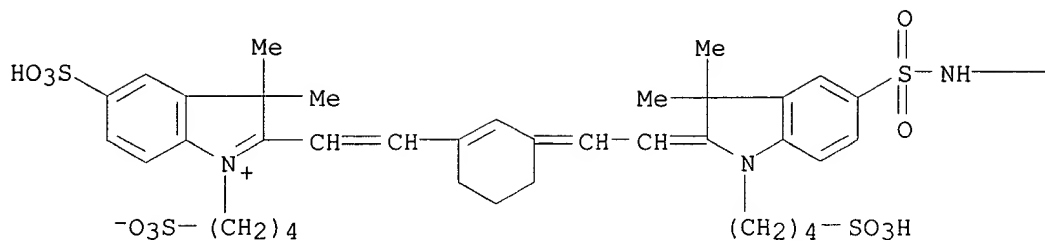
PAGE 1-B

— (CH₂)₅—CO₂H

RN 316829-94-4 HCAPLUS

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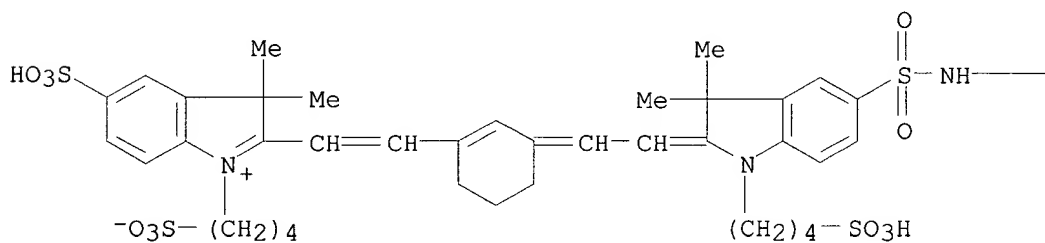


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— (CH₂)₄—NH₂

RN 316829-95-5 HCAPLUS
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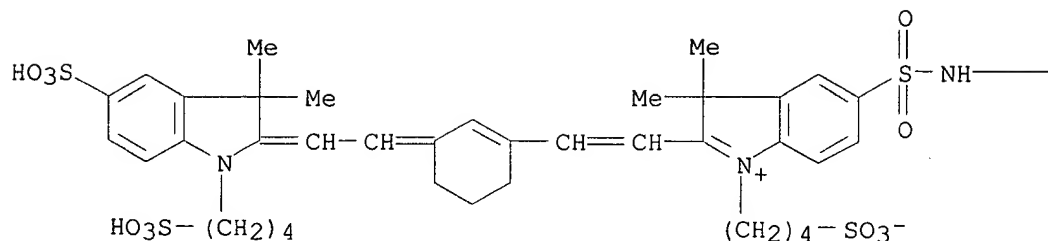


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— (CH₂)₆—NH₂

RN 316829-96-6 HCAPLUS
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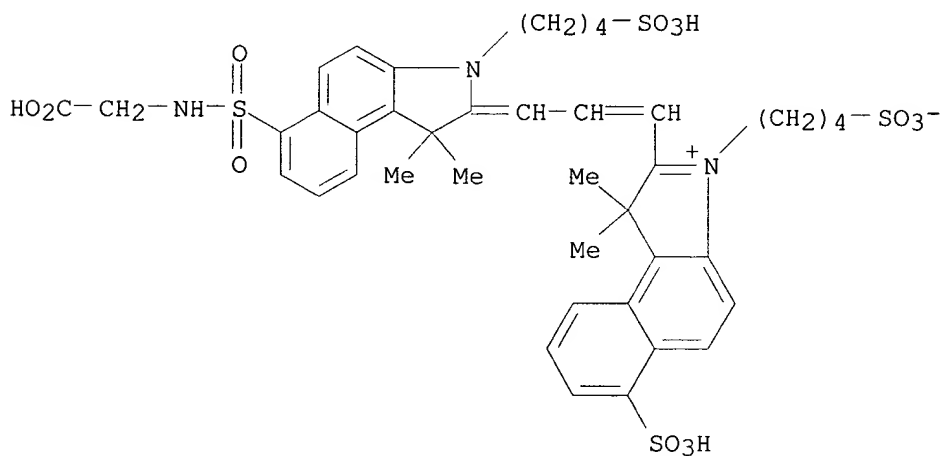


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— (CH₂)₆—OH

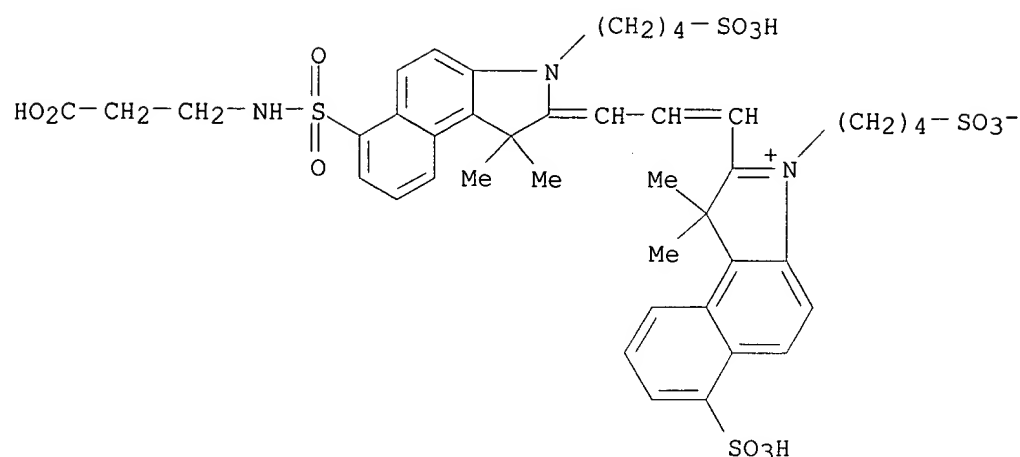
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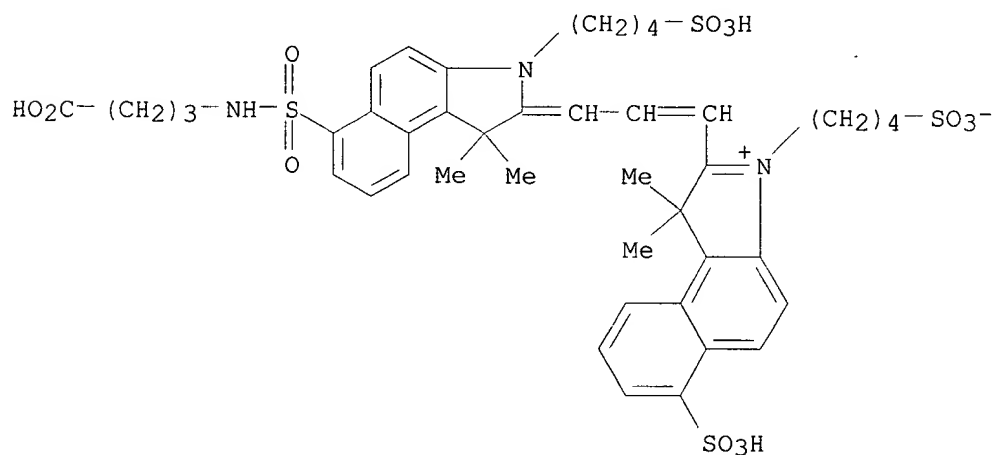
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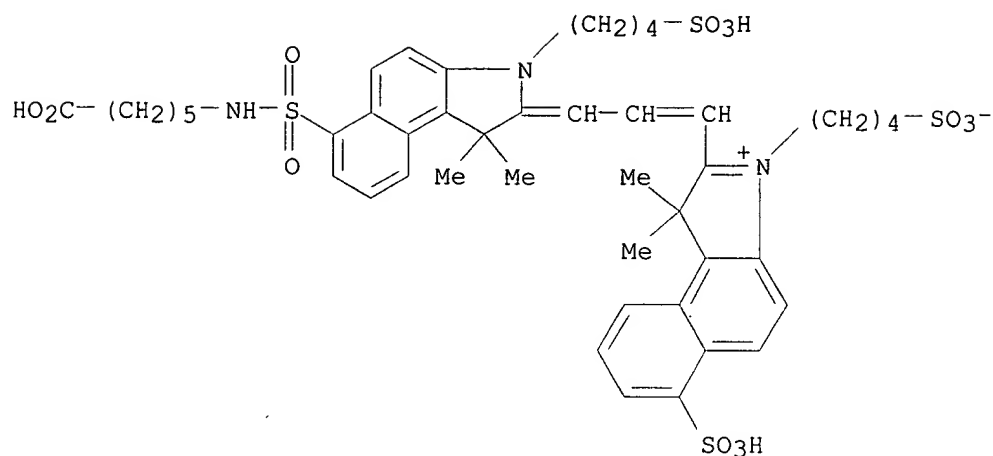
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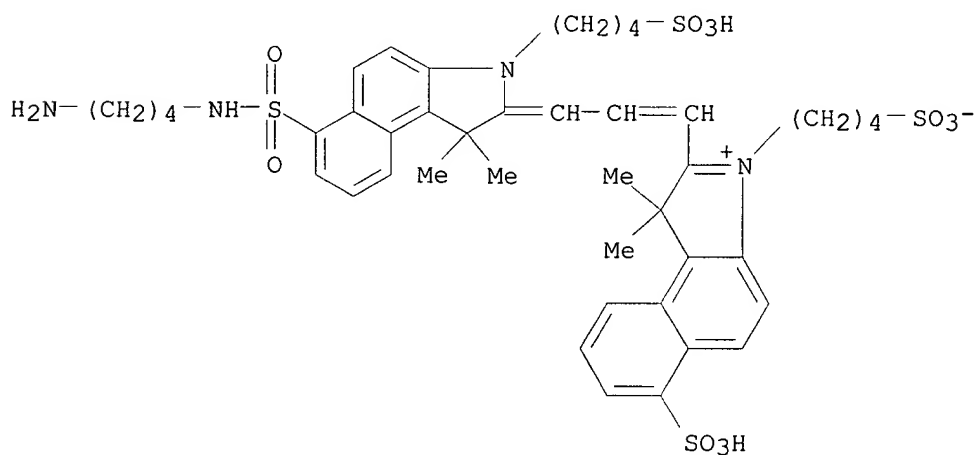
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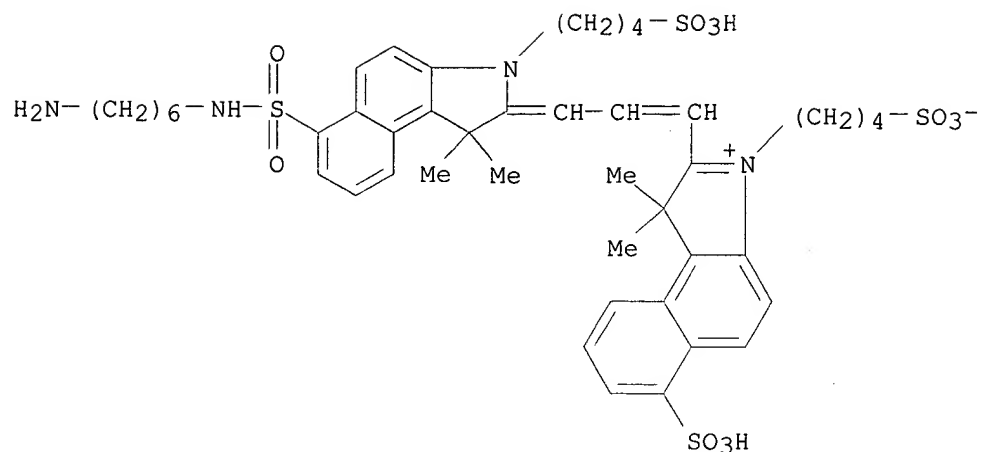
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1H-Benz[e]indolium, 2-[3-[6-[[4-(aminobutyl)amino]sulfonyl]-1,3-dihydro-1,1-dimethyl-3-(4-sulfo-butyl)-2H-benz[e]indol-2-ylidene]-1-propenyl]-1,1-dimethyl-6-sulfo-3-(4-sulfo-butyl)-, inner salt (9CI) (CA INDEX NAME)

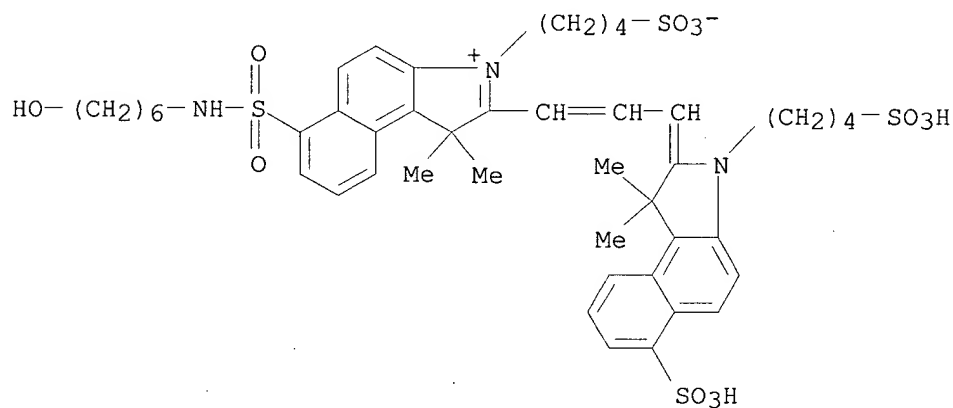


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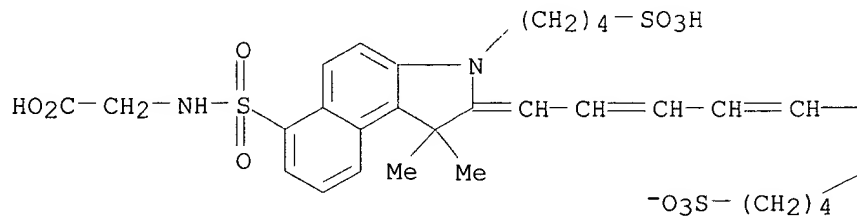


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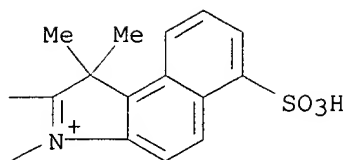


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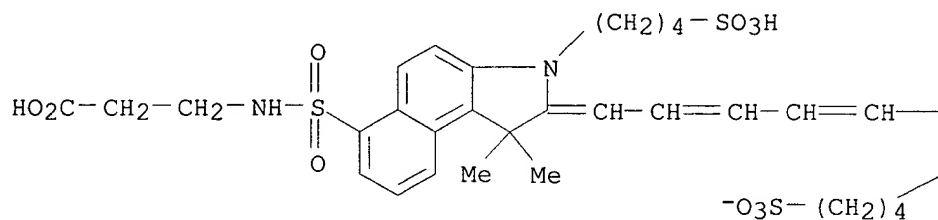
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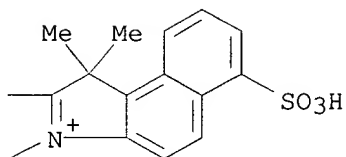
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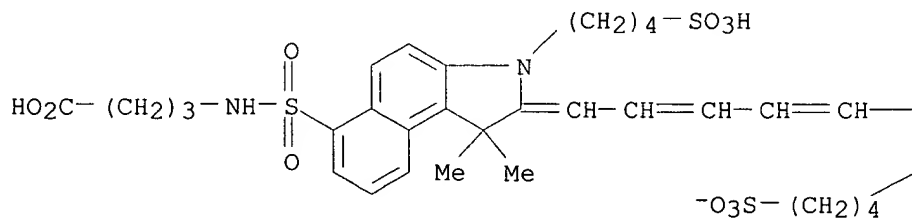
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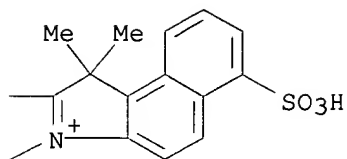
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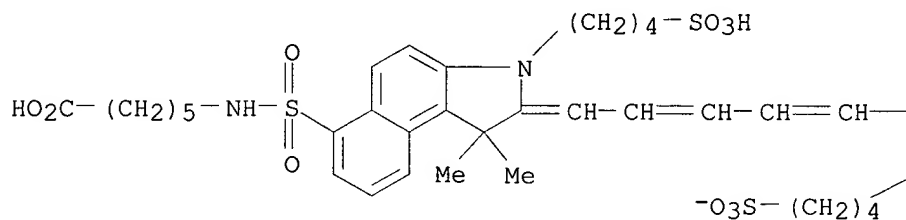
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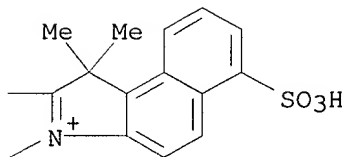
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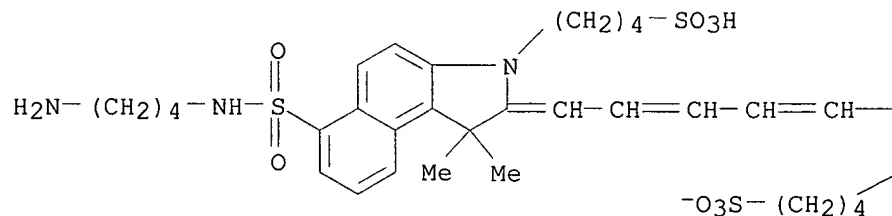
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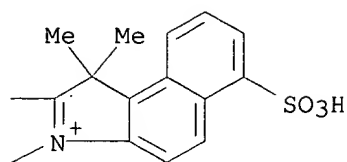
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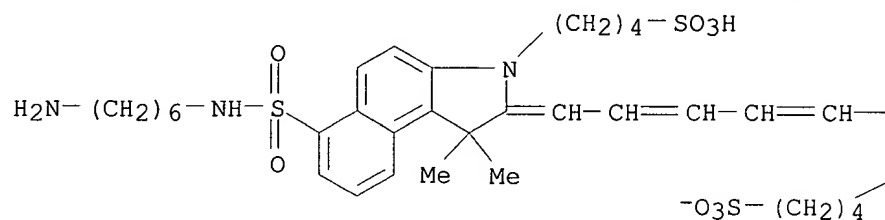
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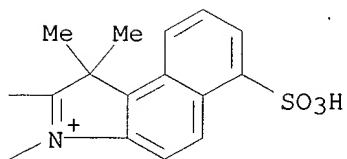
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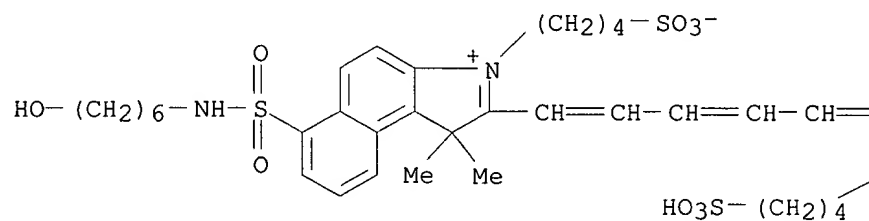
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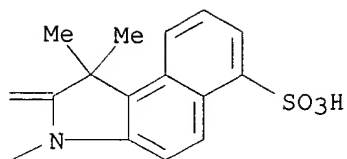
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(9CI) (CA INDEX NAME)

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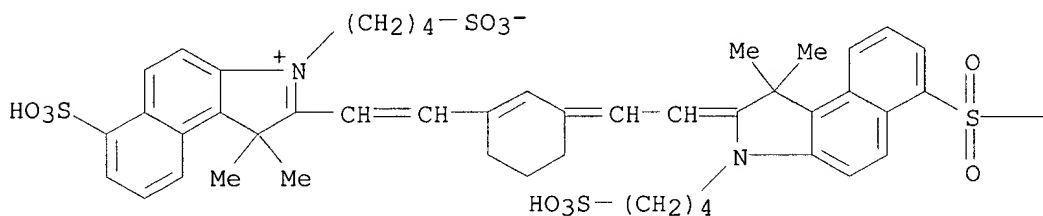
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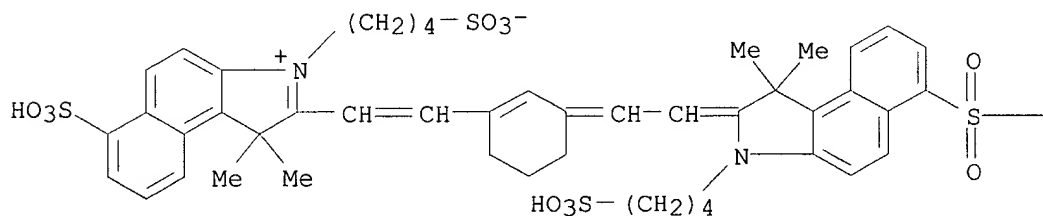
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—NH—CH₂—CO₂H

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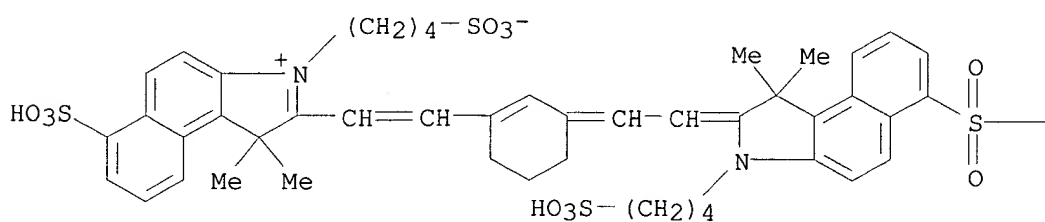
PAGE 1-B

—NH—CH₂—CH₂—CO₂H

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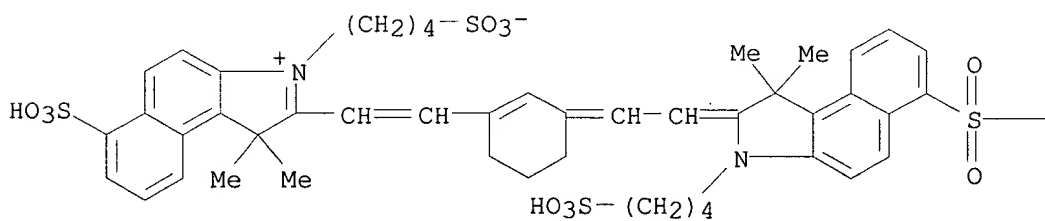
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—NH—(CH₂)₃—CO₂H

RN 316830-16-7 HCAPLUS

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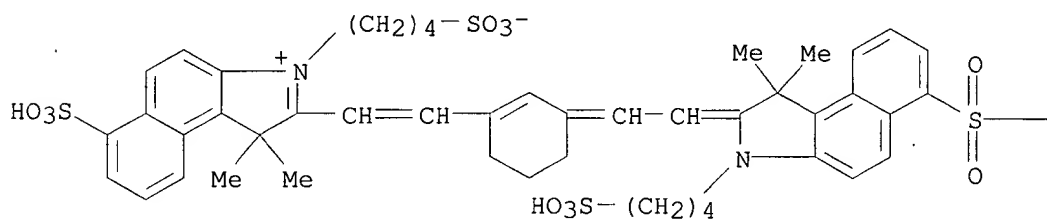
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—NH—(CH₂)₅—CO₂H

RN 316830-17-8 HCAPLUS

CN 1H-Benz[e]indolium, 2-[2-[3-[[6-[[4-aminobutyl)amino]sulfonyl]-1,3-dihydro-1,1-dimethyl-3-(4-sulfobutyl)-2H-benz[e]indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-6-sulfo-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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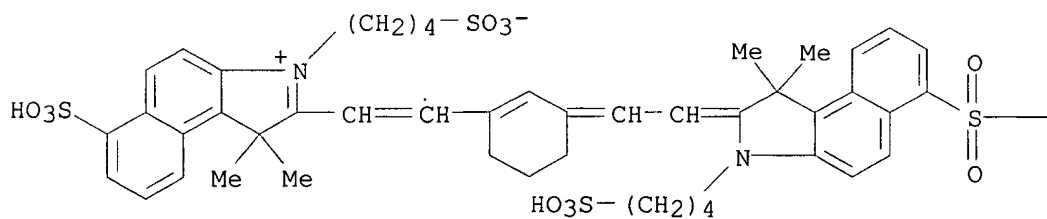
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—NH—(CH₂)₄—NH₂

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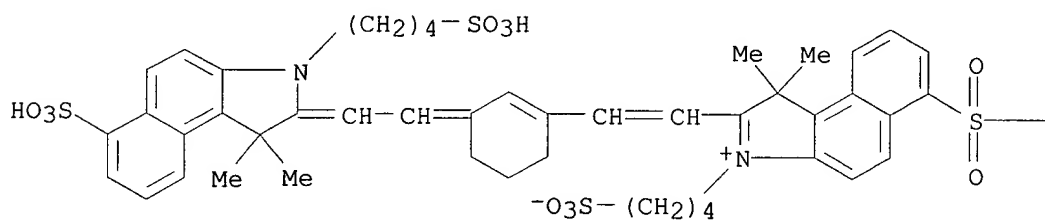
PAGE 1-B

—NH—(CH₂)₆—NH₂

RN 316830-19-0 HCAPLUS

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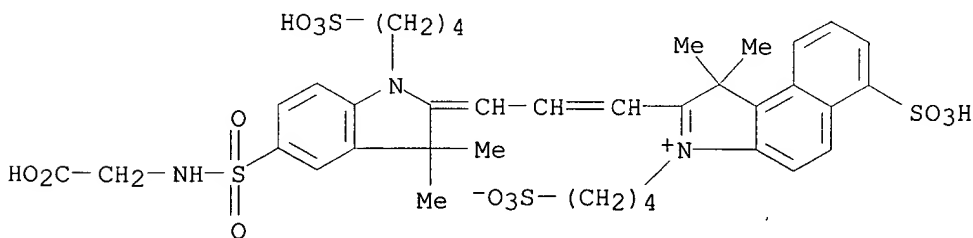


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—NH—(CH₂)₆—OH

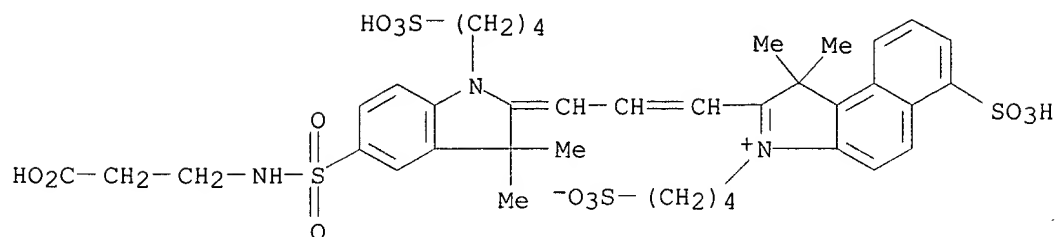
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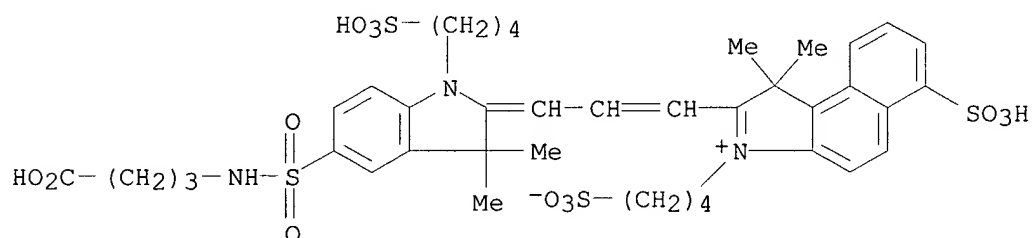
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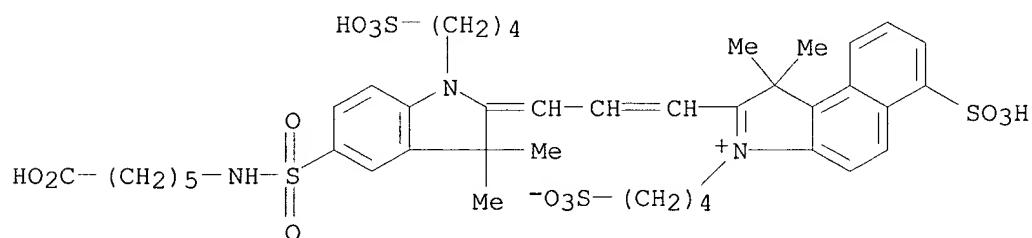
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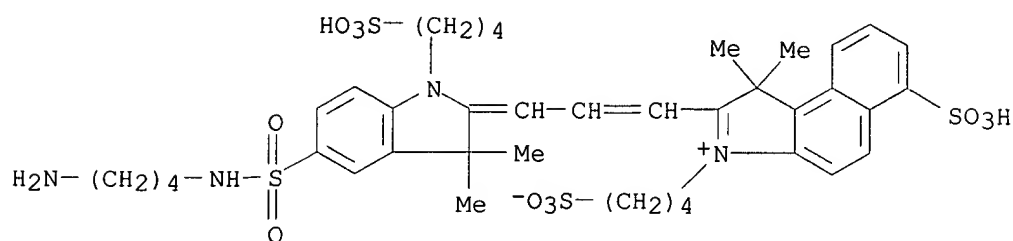
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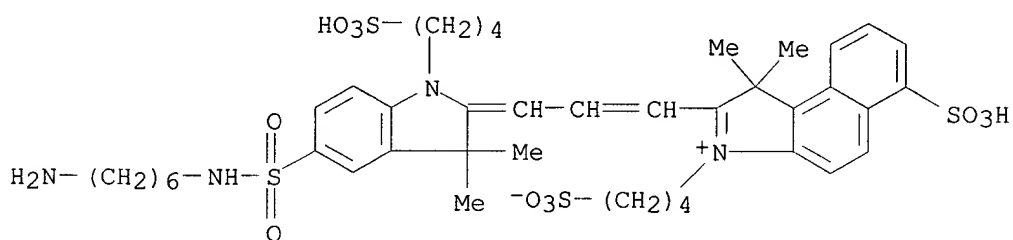
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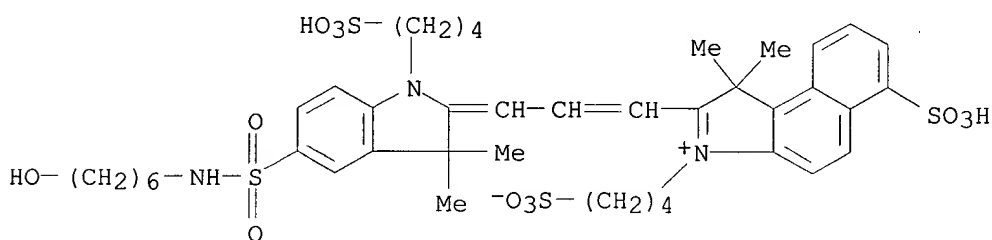
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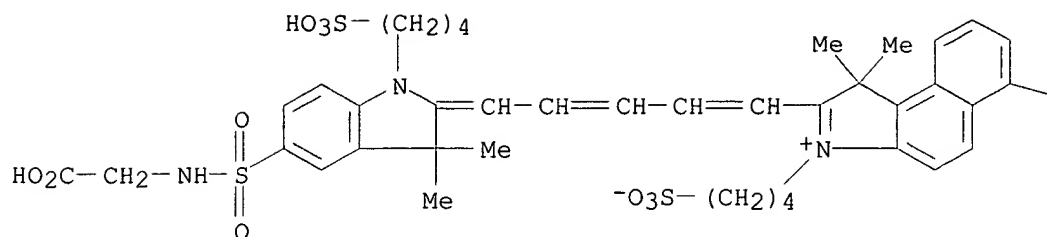
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RN 316830-27-0 HCAPLUS

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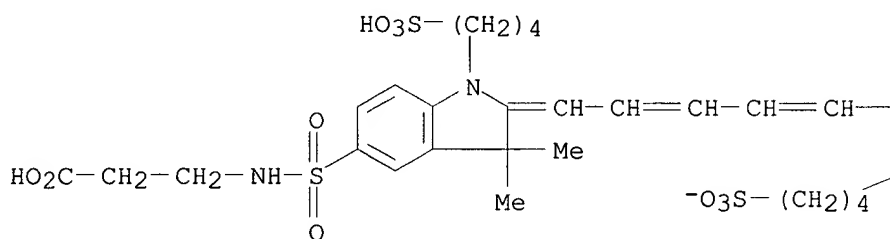


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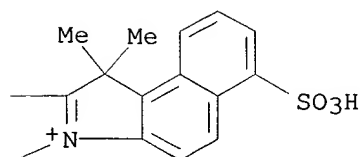
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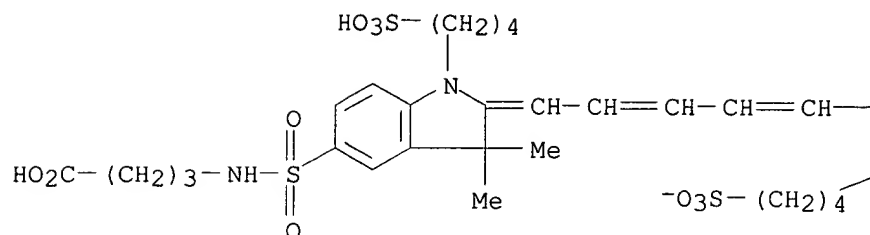


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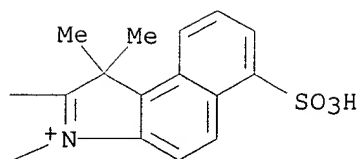


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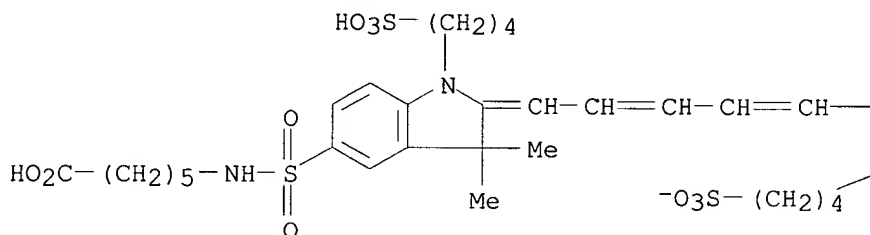
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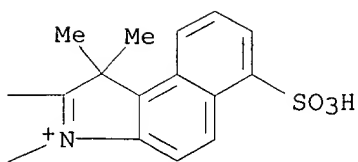
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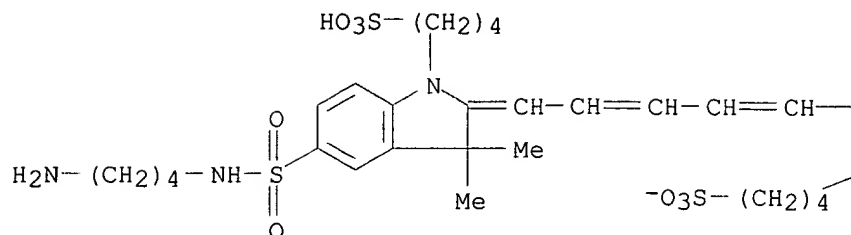
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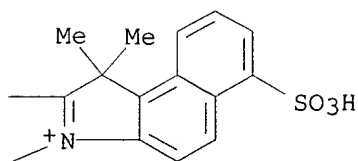
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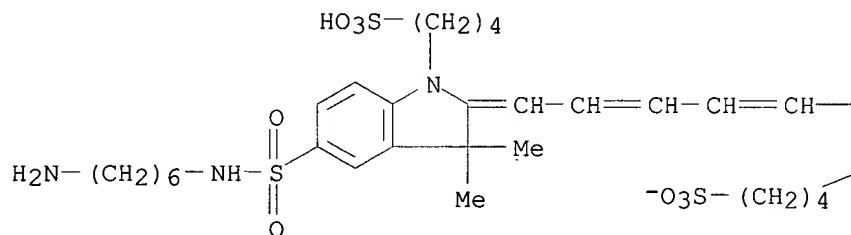
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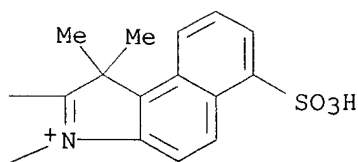
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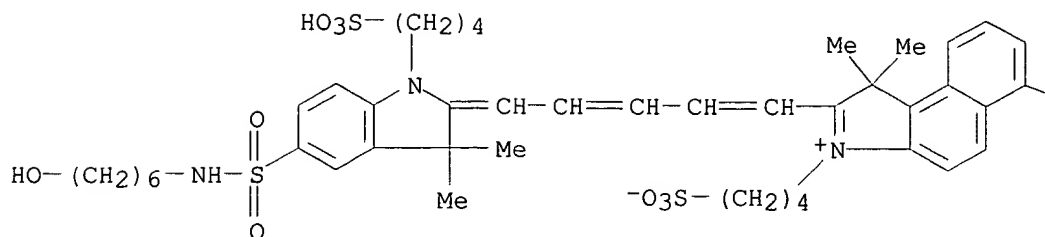
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RN 316830-33-8 HCAPLUS

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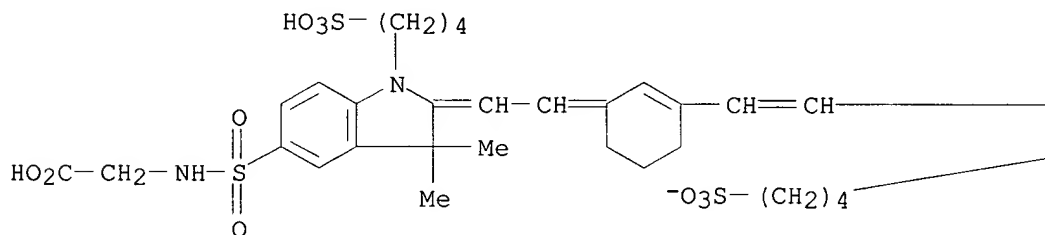


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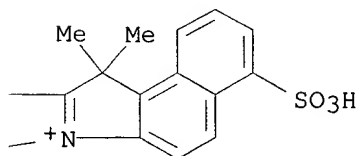
SO₃H

RN 316830-34-9 HCAPLUS
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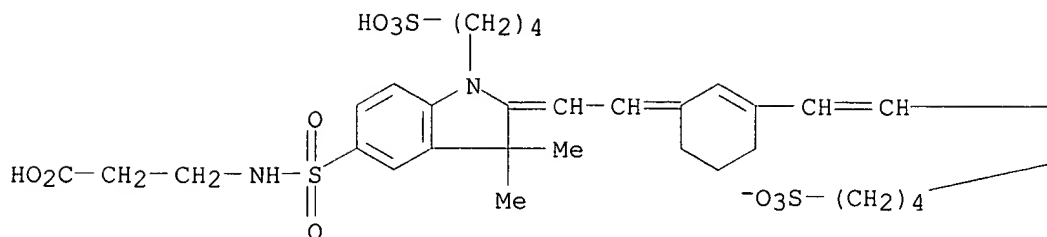


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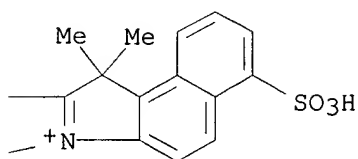


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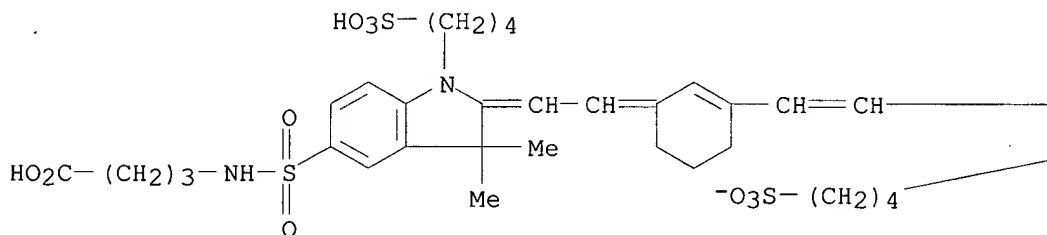
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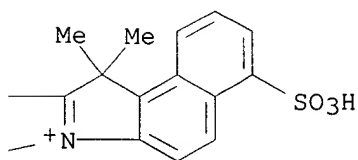
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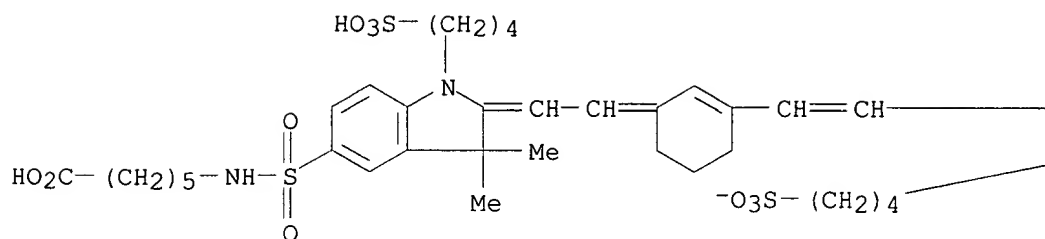
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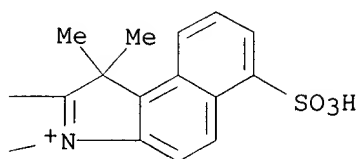
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PAGE 1-A

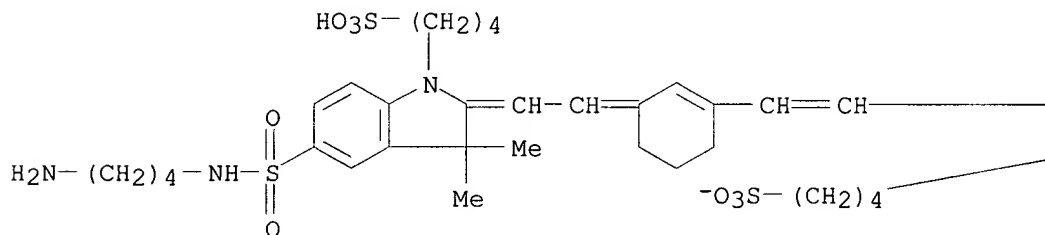


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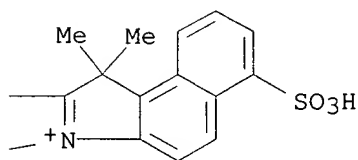


RN 316830-38-3 HCAPLUS
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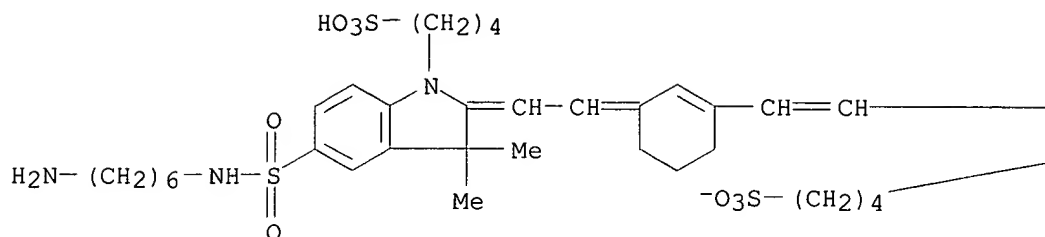


PAGE 1-B

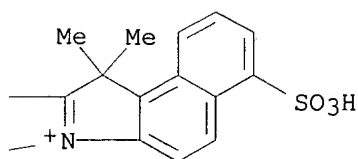


RN 316830-39-4 HCAPLUS
 CN 1H-Benz[e]indolium, 2-[2-[3-[[5-[[[6-aminohexyl)amino]sulfonyl]-1,3-dihydro-3,3-dimethyl-1-(4-sulfo-butyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-6-sulfo-3-(4-sulfo-butyl)-, inner salt (9CI) (CA INDEX NAME)

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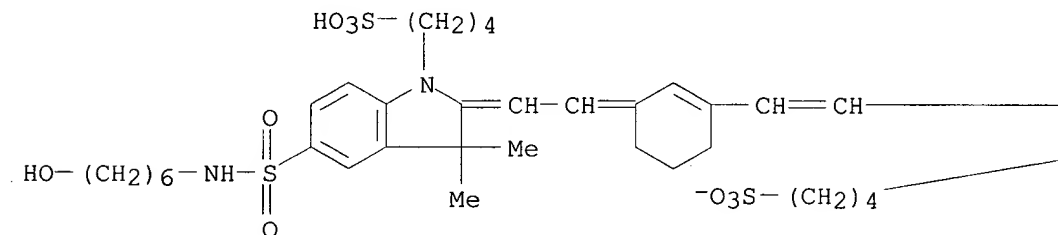
PAGE 1-B



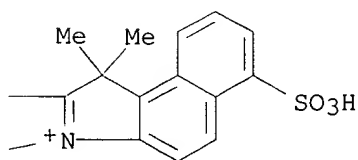
RN 316830-40-7 HCAPLUS

CN 1H-Benz[e]indolium, 2-[2-[3-[[1,3-dihydro-5-[[6-hydroxyhexyl)amino]sulfonyl]-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-6-sulfo-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A

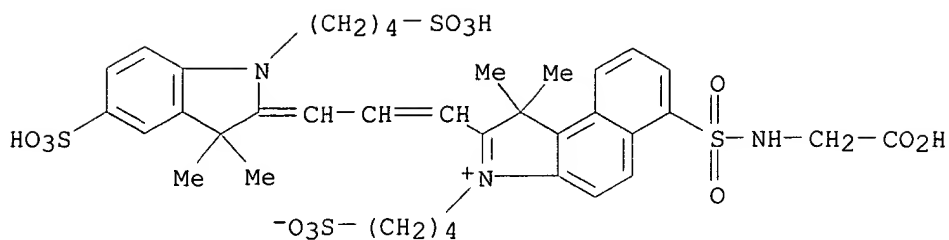


PAGE 1-B



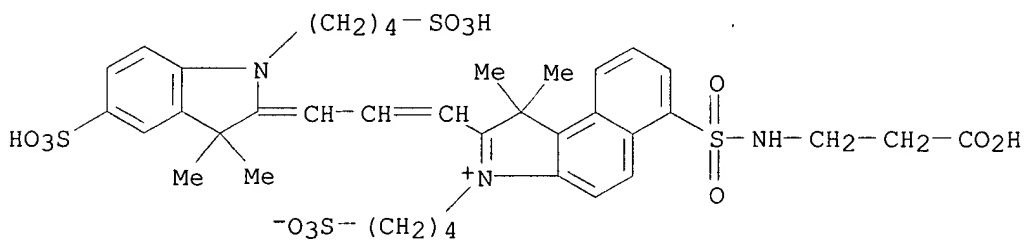
RN 316830-41-8 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[[carboxymethyl]amino]sulfonyl]-2-[3-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1-propenyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



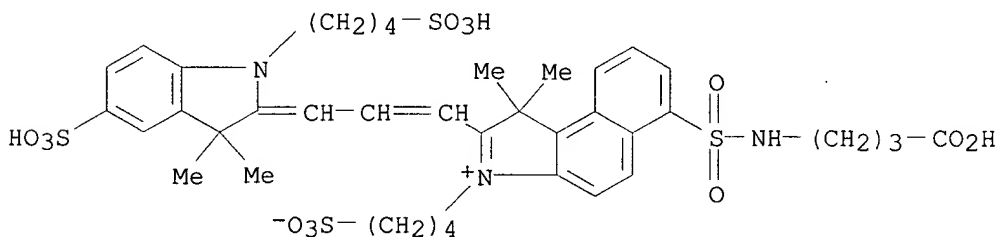
RN 316830-42-9 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[[(2-carboxyethyl)amino]sulfonyl]-2-[3-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1-propenyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



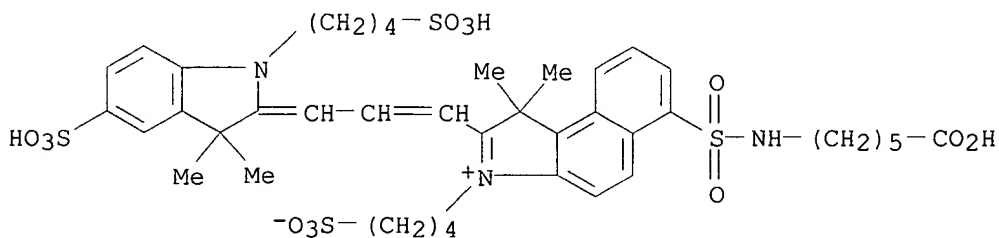
RN 316830-43-0 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[[(3-carboxypropyl)amino]sulfonyl]-2-[3-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1-propenyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



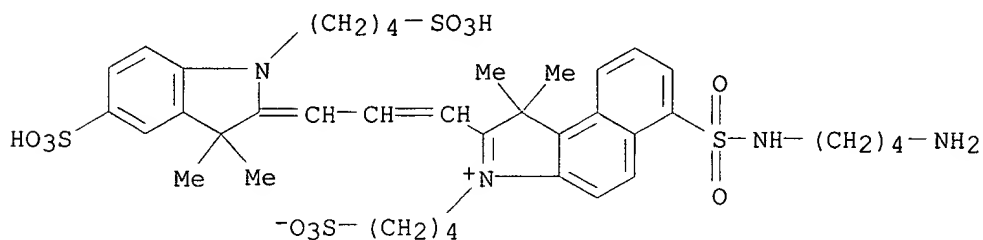
RN 316830-44-1 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[[(5-carboxypentyl)amino]sulfonyl]-2-[3-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1-propenyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



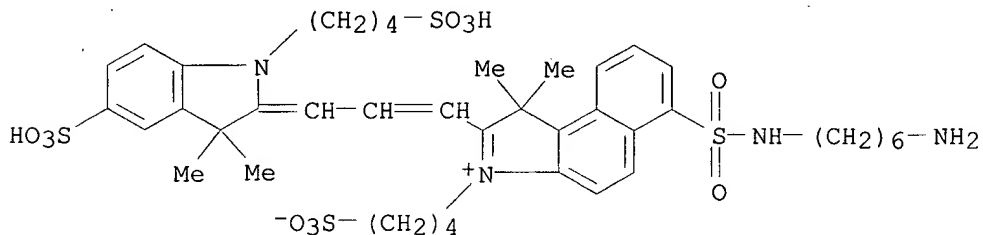
RN 316830-45-2 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[[(4-aminobutyl)amino]sulfonyl]-2-[3-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1-propenyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



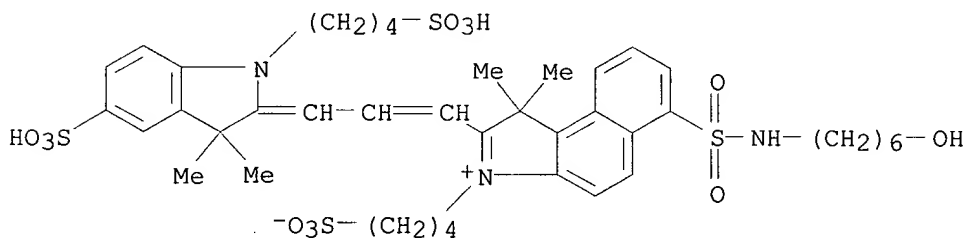
RN 316830-46-3 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[[(6-aminohexyl)amino]sulfonyl]-2-[3-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1-propenyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 316830-47-4 HCAPLUS

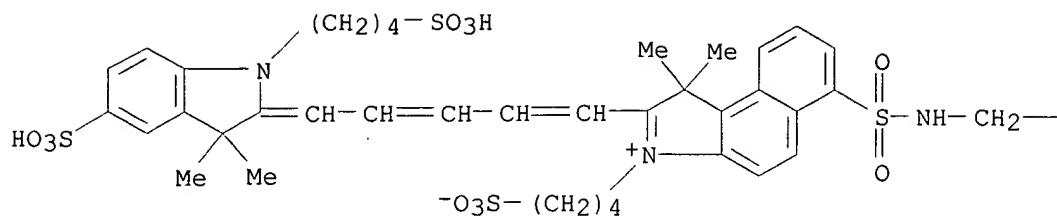
CN 1H-Benz[e]indolium, 2-[3-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1-propenyl]-6-[[[(6-hydroxyhexyl)amino]sulfonyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 316830-48-5 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[[(carboxymethyl)amino]sulfonyl]-2-[5-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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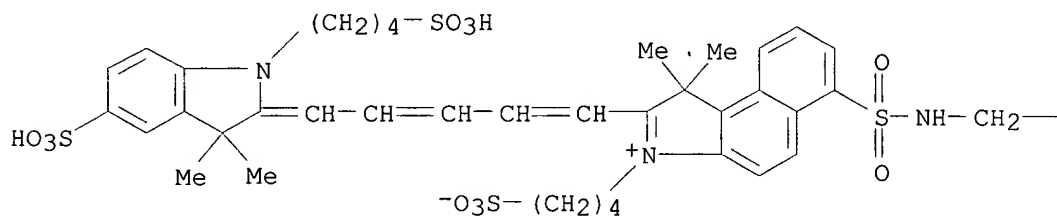
PAGE 1-B

—CO₂H

RN 316830-49-6 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[[(2-carboxyethyl)amino]sulfonyl]-2-[5-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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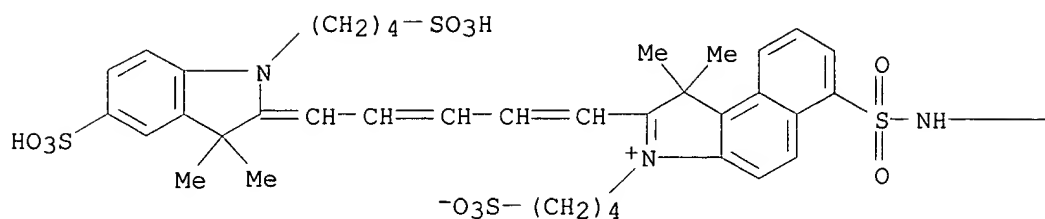
PAGE 1-B

—CH₂—CO₂H

RN 316830-50-9 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[[(3-carboxypropyl)amino]sulfonyl]-2-[5-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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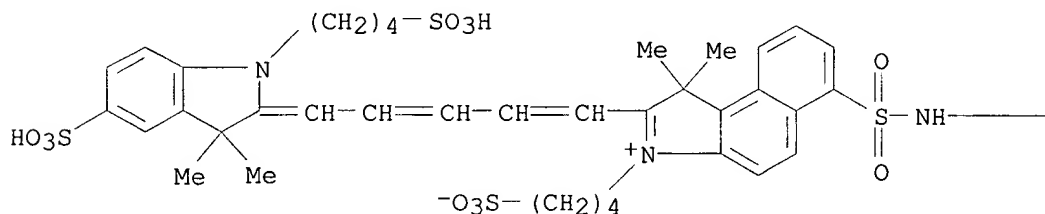
PAGE 1-B

— (CH₂)₃—CO₂H

RN 316830-51-0 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[(5-carboxypentyl)amino]sulfonyl]-2-[5-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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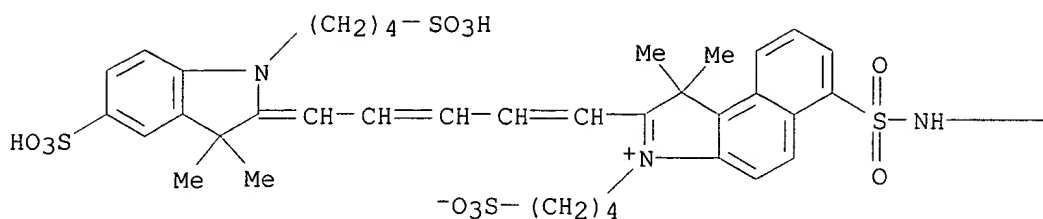
PAGE 1-B

— (CH₂)₅—CO₂H

RN 316830-52-1 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[(4-aminobutyl)amino]sulfonyl]-2-[5-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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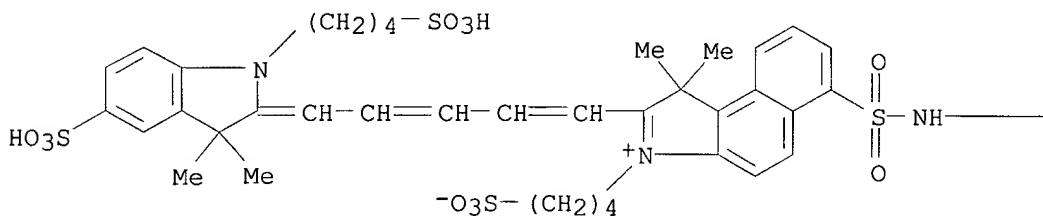
PAGE 1-B

— (CH₂)₄—NH₂

RN 316830-53-2 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[(6-aminohexyl)amino]sulfonyl]-2-[5-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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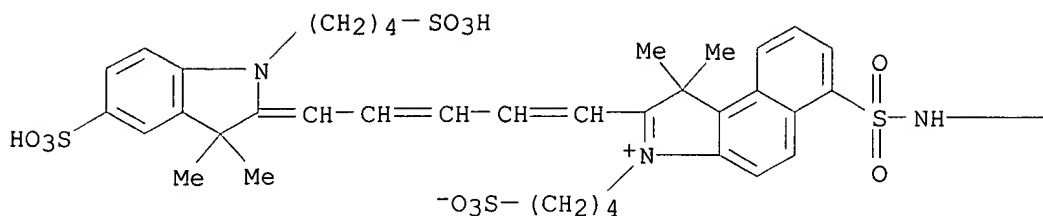
PAGE 1-B

— (CH₂)₆—NH₂

RN 316830-54-3 HCAPLUS

CN 1H-Benz[e]indolium, 2-[5-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-6-[[(6-hydroxyhexyl)amino]sulfonyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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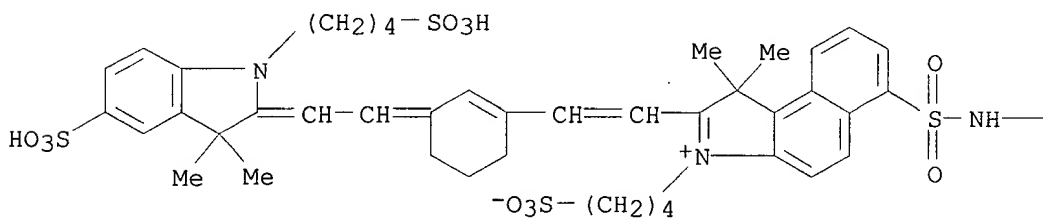
PAGE 1-B

— (CH₂)₆—OH

RN 316830-55-4 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[[(carboxymethyl)amino]sulfonyl]-2-[2-[3-[[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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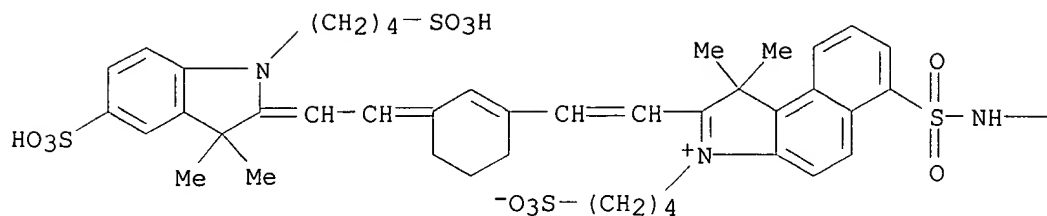
PAGE 1-B

— CH₂—CO₂H

RN 316830-56-5 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[[(2-carboxyethyl)amino]sulfonyl]-2-[2-[3-[[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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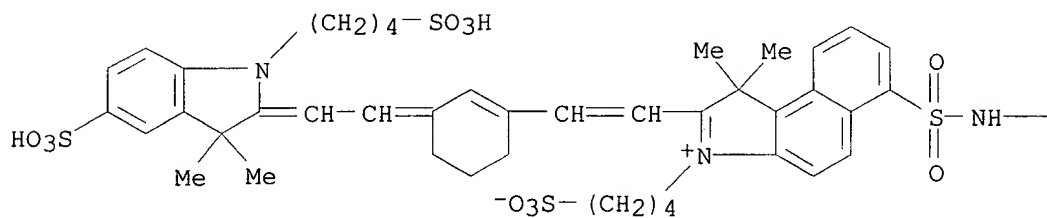
PAGE 1-B

—CH₂—CH₂—CO₂H

RN 316830-57-6 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[(3-carboxypropyl) amino] sulfonyl]-2-[2-[3-[[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A



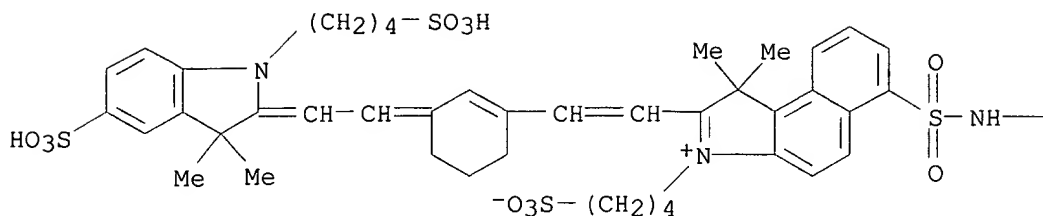
PAGE 1-B

—(CH₂)₃—CO₂H

RN 316830-58-7 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[(5-carboxypentyl) amino] sulfonyl]-2-[2-[3-[[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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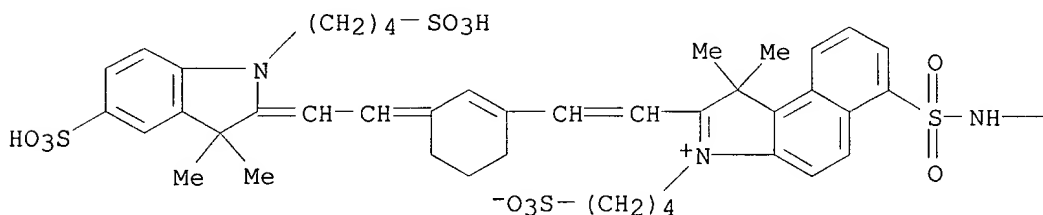
PAGE 1-B

— (CH₂)₅—CO₂H

RN 316830-59-8 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[(4-aminobutyl)amino]sulfonyl]-2-[2-[3-[[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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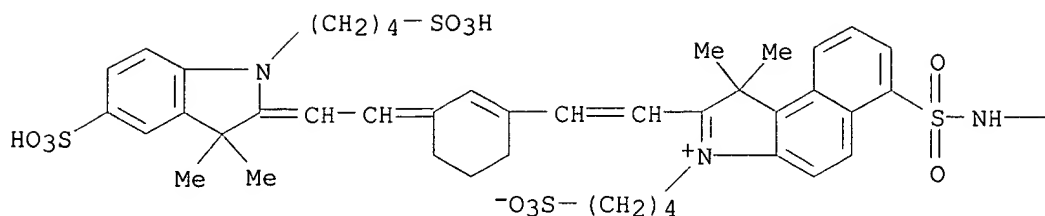
PAGE 1-B

— (CH₂)₄—NH₂

RN 316830-60-1 HCAPLUS

CN 1H-Benz[e]indolium, 6-[[(6-aminohexyl)amino]sulfonyl]-2-[2-[3-[[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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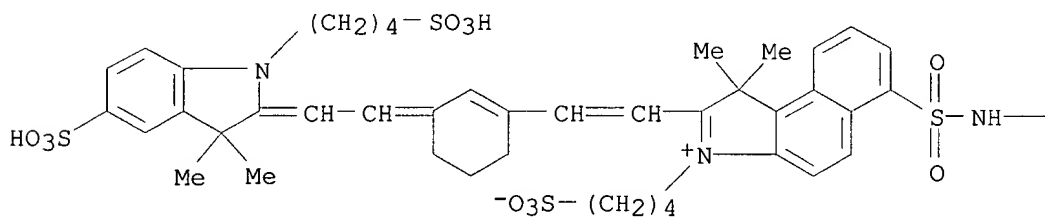
PAGE 1-B

— (CH₂)₆—NH₂

RN 316830-61-2 HCAPLUS

CN 1H-Benz[e]indolium, 2-[2-[3-[[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-6-[[(6-hydroxyhexyl) amino]sulfonyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

— (CH₂)₆—OH

REFERENCE COUNT:

6

THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 160 8

L60 ANSWER 8 OF 17 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:825711 HCAPLUS

DOCUMENT NUMBER: 134:159683

TITLE: Identification of single **fluorescently** labelled **mononucleotide** molecules in solution by spectrally resolved time-correlated single-photon counting

AUTHOR(S): Herten, D. P.; Tinnefeld, P.; Sauer, M.

CORPORATE SOURCE: Physikalisches-Chemisches Institut, Universitat Heidelberg, Heidelberg, 69120, Germany

SOURCE: Applied Physics B: Lasers and Optics (2000), 71(5), 765-771

CODEN: APBOEM; ISSN: 0946-2171

PUBLISHER: Springer-Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We describe a method to identify single dye-labeled mononucleotide mols. in soln. with high classification probability based on confocal microscopy in combination with spectrally and time-resolved fluorescence detection with two detectors. For efficient excitation of the labeled mononucleotide mols. JA133-dUTP, JA169-dUTP, Cy5-dCTP, and JA242-dUTP a short-pulse diode laser emitting at 634 nm with a repetition rate of 64 MHz was applied. The time-resolved fluorescence signals of individual mols. were analyzed and identified by a max. likelihood estimator (MLE). Scatter plots of spectrally and time-resolved fluorescence data demonstrated the existence of four distinct populations with sym. shape. The distributions of each of the mononucleotide **conjugates** were detd. by fitting a superposition of two independent Gaussians. Taking only those single-mol. bursts which contain more than 50 photon counts, three labeled mononucleotide mols. were identified in soln. by spectrally and time-resolved fluorescence spectroscopy with a probability of correct classification of .apprx. 99%.

IT 325747-77-1

RL: ANT (Analyte); BSU (Biological study, unclassified); PRP (Properties);

ANST (Analytical study); BIOL (Biological study)

(identification of single **fluorescently** labeled

mononucleotide mols. in soln. by spectrally resolved time-correlated single-photon counting)

RN 325747-77-1 HCAPLUS

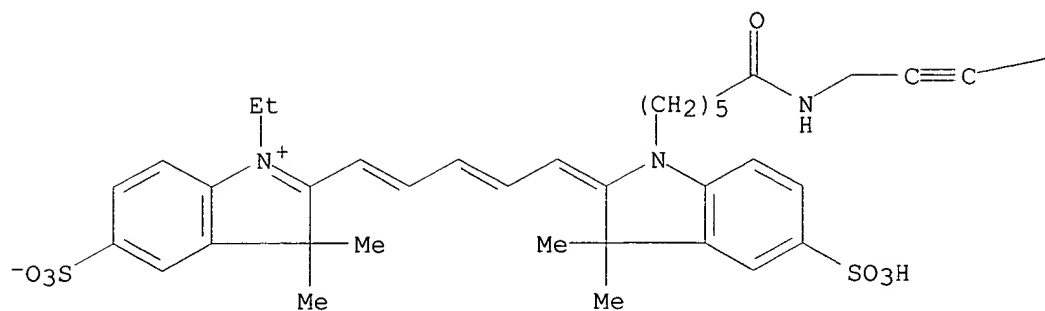
CN 3H-Indolium, 2-[5-[1-[6-[[3-[4-amino-1-[2-deoxy-5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-erythro-pentofuranosyl]-1,2-dihydro-2-oxo-5-pyrimidinyl]-2-propynyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

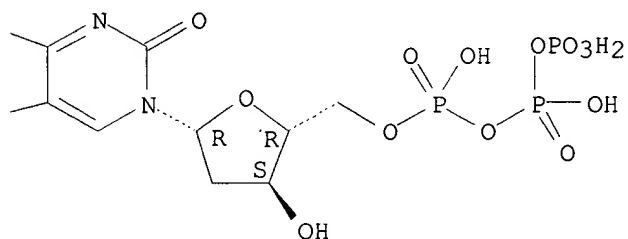
Double bond geometry unknown.

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H₂N



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REFERENCE COUNT:

23

THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L60 ANSWER 9 OF 17 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2000:790577 HCAPLUS
 DOCUMENT NUMBER: 133:351506
 TITLE: Aza-benzazolum-containing cyanine dyes and their use
 in fluorescent biological stains
 INVENTOR(S): Haugland, Richard P.; Yue, Stephen T.
 PATENT ASSIGNEE(S): Molecular Probes, Inc., USA
 SOURCE: PCT Int. Appl., 87 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000066664	A1	20001109	WO 2000-US11549	20000426

W: AU, CA, JP

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE

PRIORITY APPLN. INFO.: US 1999-131782P P 19990430
US 1999-158859P P 19991012

OTHER SOURCE(S): CASREACT 133:351506

AB Unsym. cyanine dyes that incorporate an aza-benzazolum ring moiety are disclosed, including cyanine dyes substituted by a cationic side chain, monomeric and dimeric cyanine dyes, chem. reactive cyanine dyes, and **conjugates** of cyanine dyes. The dyes are virtually non-fluorescent when dild. in aq. soln., but exhibit bright **fluorescence** when assocd. with **nucleic** acid polymers such as DNA or RNA, or when assocd. with detergent-complexed proteins. A variety of applications are described for detection and quantitation of nucleic acids and detergent-complexed proteins in a variety of samples, including solns., electrophoretic gels, cells, and microorganisms.

IT 305802-24-8P

RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); IMF (Industrial manufacture); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(dye; prodn. of azabenzazolum cyanine dyes for fluorescent biol. stains)

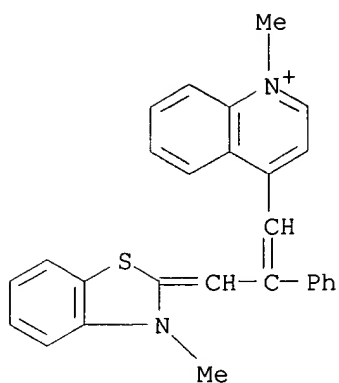
RN 305802-24-8 HCAPLUS

CN Quinolinium, 1-methyl-4-[3-(3-methyl-2(3H)-benzothiazolylylidene)-2-phenyl-1-propenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

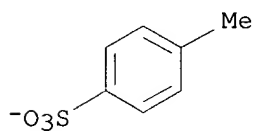
CRN 305802-23-7

CMF C27 H23 N2 S



CM 2

CRN 16722-51-3
CMF C7 H7 O3 S



REFERENCE COUNT:

8

THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 160 10

L60 ANSWER 10 OF 17 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1999:794372 HCAPLUS

DOCUMENT NUMBER: 132:35989

TITLE: Preparation of **cyanine** dye activating group with improved coupling selectivity to label chain terminators in nucleotide sequencing

INVENTOR(S): Shen, Gene G.-Y.; Dobashi, Thomas S.

PATENT ASSIGNEE(S): Beckman Instruments, Inc., USA

SOURCE: U.S., 19 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent

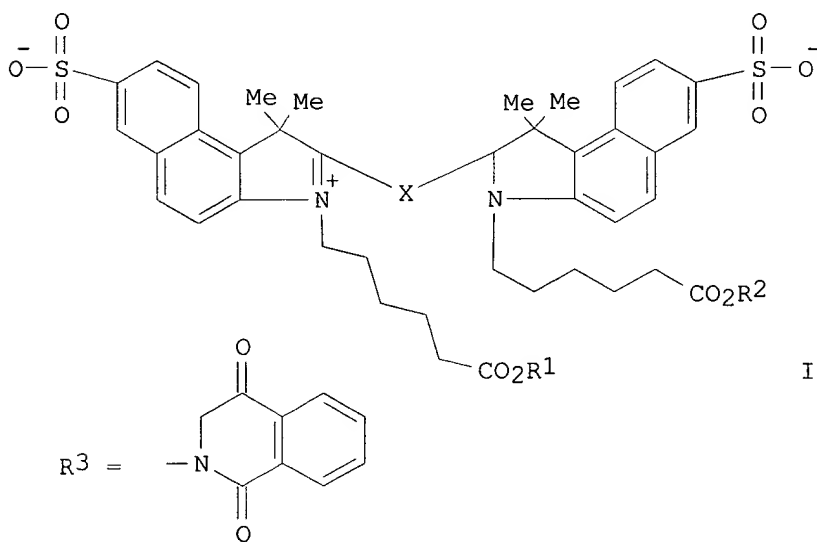
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6002003	A	19991214	US 1998-59900	19980414

OTHER SOURCE(S): MARPAT 132:35989
GI



AB Activating groups for **cyanine** dyes I (R1 = R2 = H; R1 = phthalimido; R2 = R3; X = CH:CHCH:CHCH:, CH:CHCH:CHCH:CHCH:) used to label chain terminators in nucleotide sequencing, based on N-hydroxyphthalimide, are disclosed. From these activating groups, activated dyes of the present invention are prepd. which react with the derivatized nucleotide chain terminators to give a labeled chain terminator of the present invention. The activating groups of the present invention allow the dye-chain terminator reaction to occur at a much higher yield and with much greater selectivity for the mono-substituted product, compared with the prior art.

IT 252255-44-0P 252255-45-1P 252255-48-4P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of **cyanine** dye activating group with improved

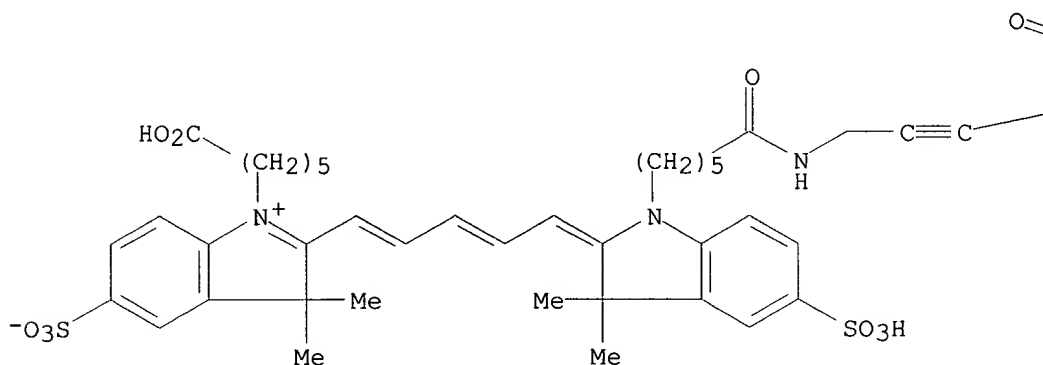
coupling selectivity to label chain terminators in nucleotide sequencing)

RN 252255-44-0 HCAPLUS

CN 3H-Indolium, 1-(5-carboxypentyl)-2-[5-[1,3-dihydro-3,3-dimethyl-1-[6-oxo-6-[[3-[1,2,3,4-tetrahydro-2,4-dioxo-1-[(2R,5S)-tetrahydro-5-(3,5,7,7-tetrahydroxy-3,5,7-trioxido-2,4,6-trioxa-3,5,7-triphosphahept-1-yl)-2-furanyl]-5-pyrimidinyl]-2-propynyl]amino]hexyl]-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-, inner salt, monopotassium trisodium salt (9CI) (CA INDEX NAME)

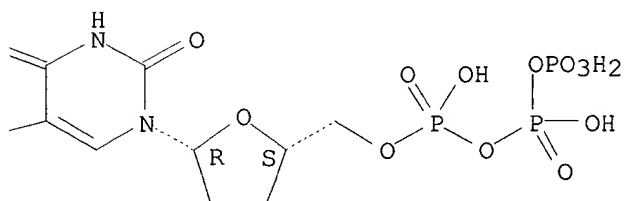
Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



● K

PAGE 1-B



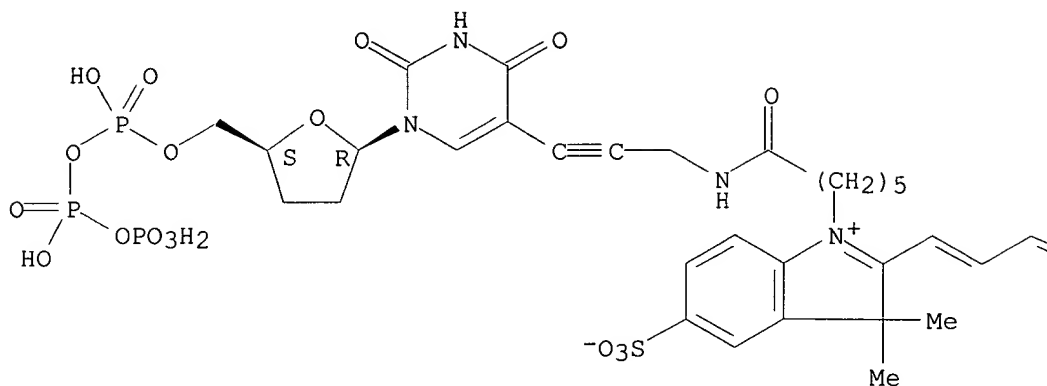
● 3 Na

RN 252255-45-1 HCAPLUS

CN 3H-Indolium, 2-[5-[1,3-dihydro-3,3-dimethyl-1-[6-oxo-6-[[3-[1,2,3,4-tetrahydro-2,4-dioxo-1-[(2R,5S)-tetrahydro-5-(3,5,7,7-tetrahydroxy-3,5,7-trioxido-2,4,6-trioxa-3,5,7-triphosphahept-1-yl)-2-furanyl]-5-pyrimidinyl]-2-propynyl]amino]hexyl]-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-3,3-dimethyl-1-[6-oxo-6-[[3-[1,2,3,4-tetrahydro-2,4-dioxo-1-[(2R,5S)-tetrahydro-5-(3,5,7,7-tetrahydroxy-3,5,7-trioxido-2,4,6-trioxa-3,5,7-triphosphahept-1-yl)-2-furanyl]-5-pyrimidinyl]-2-propynyl]amino]hexyl]-5-sulfo-, inner salt, monopotassium hexasodium salt (9CI) (CA INDEX NAME)

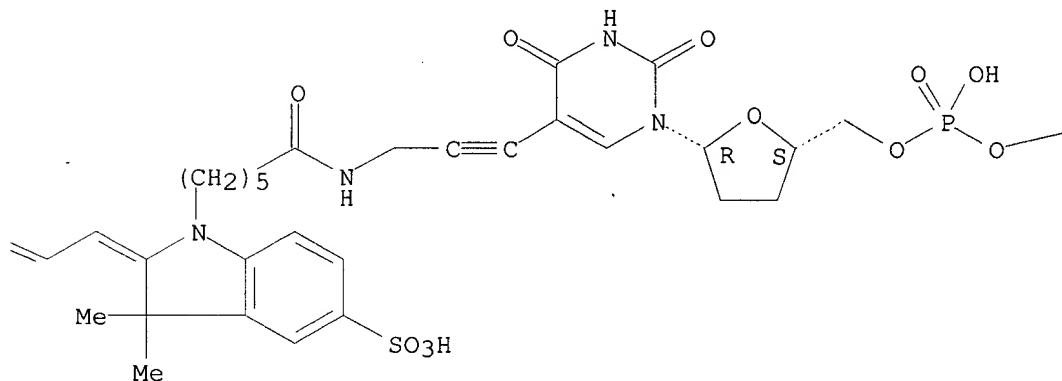
Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A

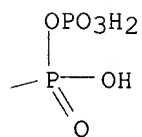


● K

PAGE 1-B



PAGE 1-C



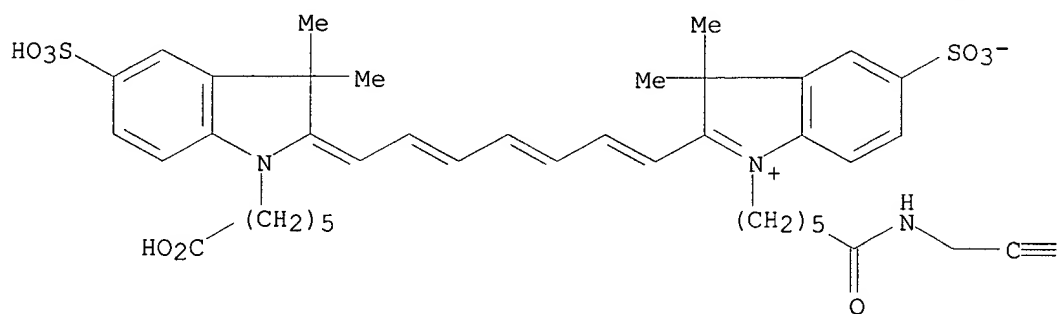
● 6 Na

RN 252255-48-4 HCAPLUS
CN 3H-Indolium, 1-[6-[3-[4-amino-1,2-dihydro-2-oxo-1-[(2R,5S)-tetrahydro-5-

(3,5,7,7-tetrahydroxy-3,5,7-trioxido-2,4,6-trioxa-3,5,7-triphasahept-1-yl)-2-furanyl]-5-pyrimidinyl]-2-propynyl]amino]-6-oxohexyl]-2-[5-[1-(5-carboxypentyl)-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-3,3-dimethyl-5-sulfo-, inner salt, monopotassium trisodium salt (9CI) (CA INDEX NAME)

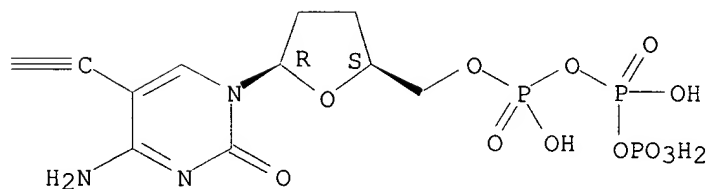
Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



● K

PAGE 1-B



● 3 Na

REFERENCE COUNT:

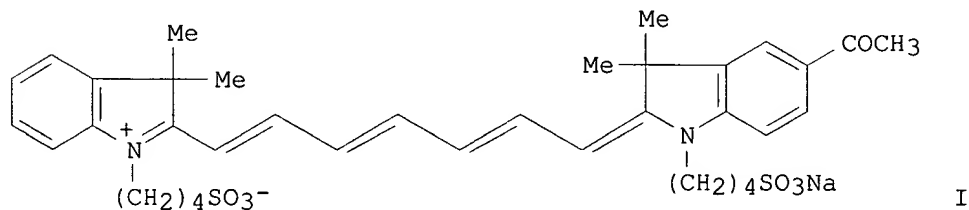
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THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 160 11

L60 ANSWER 11 OF 17 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1998:708965 HCAPLUS
 DOCUMENT NUMBER: 129:335785
 TITLE: Acid-labile and enzymically cleavable dye
conjugates for diagnosis with near-IR
 radiation and for therapy
 INVENTOR(S): Licha, Kai; Riefke, Bjoern; Semmler, Wolfhard;
 Wrasidlo, Wolfgang
 PATENT ASSIGNEE(S): Institut fuer Diagnostikforschung G.m.b.H. an der
 Freien Universitaet Berlin, Germany
 SOURCE: PCT Int. Appl., 40 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9847538	A2	19981029	WO 1998-DE1001	19980402
WO 9847538	A3	19990121		
W: AU, CA, CN, HU, JP, KR, NO, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19717904	A1	19981029	DE 1997-19717904	19970423
AU 9879057	A1	19981113	AU 1998-79057	19980402
AU 733757	B2	20010524		
EP 988060	A2	20000329	EP 1998-929212	19980402
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001521530	T2	20011106	JP 1998-544715	19980402
NO 9905181	A	19991022	NO 1999-5181	19991022
PRIORITY APPLN. INFO.:			DE 1997-19717904 A	19970423
			WO 1998-DE1001 W	19980402
OTHER SOURCE(S):		MARPAT 129:335785		
GI				



AB Dyes which fluoresce in the near-IR spectral region are provided, the fluorescence of which is quenched by coupling via a cleavable linker to arom. compds. (e.g. dyes, drugs), antibodies, antibody fragments, or other proteins. Cleavage of such a construct in vivo at a target site (e.g. a tumor or focus of inflammation) leads to an increase in near-IR fluorescence, which can be detected even at deep sites owing to the high

transparency of tissues to near-IR radiation. Suitable dyes include tetrapyrrole, tetraazapyrrole, xanthine, phenoxazine, phenothiazine, and esp. polymethine dyes such as cyanine dyes. Drug-dye **conjugates** in which the therapeutic activity of the drug is masked by coupling to the dye may serve as prodrugs which, after administration, are cleaved at a target site to release the active agent, as well as the fluorescent dye which may act as photosensitizer, at the site. The linker may be acid labile, i.e. cleavable at the low pH characteristic of tumors and sites of bacterial inflammation, or cleavable by enzymes which occur in diseased tissues, e.g. bacterial enzymes. Thus, a cyanine dye, 5-(1-oxoethyl)-1,1'-(4-sulfobutyl)indotricarbocyanine Na salt (I) was prepd. by reaction of 4-hydrazinophenyl Me ketone with 3-methyl-2-butanone followed by 1,4-butanedisulfone to form 5-(1-oxoethyl)-1-(4-sulfobutyl)-2,3,3-trimethyl-3H-indolenine and further reaction of this compd. with glutaraldehyde dianil-HCl. Reaction of I with 4-carboxyphenylsulfonylhydrazine followed by N-hydroxysuccinimide and DCCD produced an acid-labile N-hydroxysuccinimidyl ester, which was coupled to anti-melanoma monoclonal antibody 9.2.27; the antibody **conjugate** had a fluorescence quantum yield of 0.1%.

IT 215114-68-4P 215114-71-9P 215114-72-0P

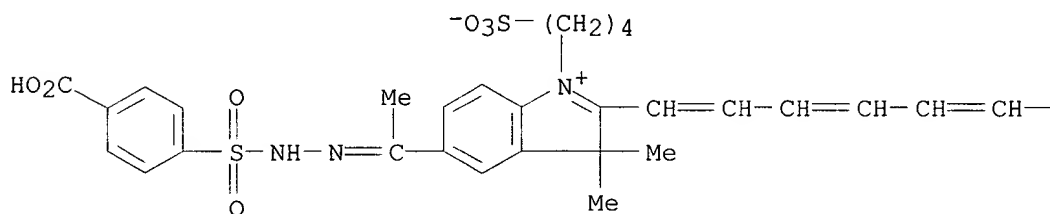
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(acid-labile and enzymically cleavable dye **conjugates** for diagnosis with near-IR radiation and for therapy)

RN 215114-68-4 HCAPLUS

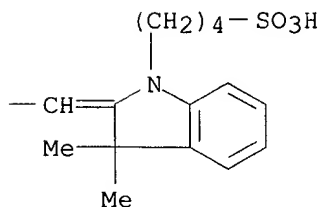
CN 3H-Indolium, 5-[1-[[[(4-carboxyphenyl)sulfonyl]hydrazono]ethyl]-2-[7-[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na

PAGE 1-B

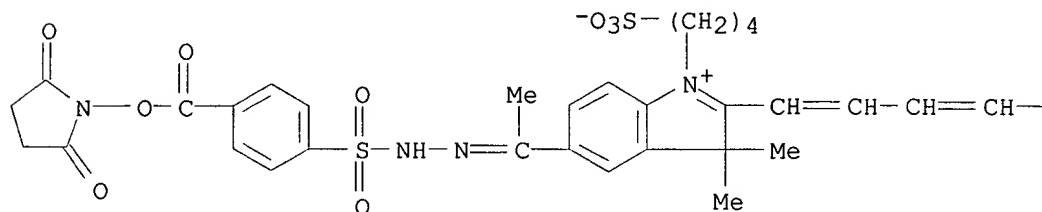


RN 215114-71-9 HCAPLUS

CN 3H-Indolium, 5-[1-[[[4-[[[(2,5-dioxo-1-pyrrolidinyl)oxy]carbonyl]phenyl]sul

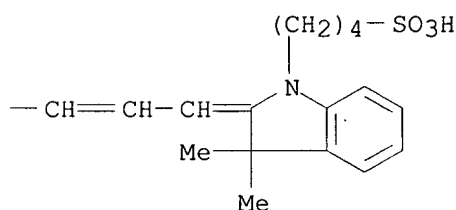
fonyl]hydrazono]ethyl]-2-[7-[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na

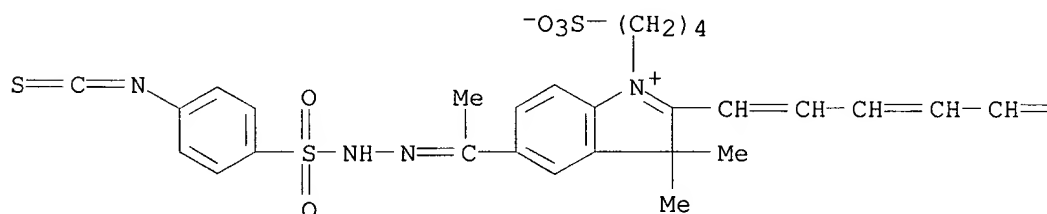
PAGE 1-B



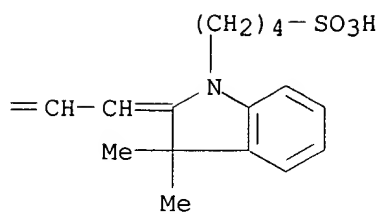
RN 215114-72-0 HCAPLUS

CN 3H-Indolium, 2-[7-[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-5-[1-[[4-isothiocyanatophenyl)sulfonyl]hydrazono]ethyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na



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L60 ANSWER 12 OF 17 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:604701 HCAPLUS

DOCUMENT NUMBER: 129:216857

TITLE: Preparation of **indocarbocyanine** and **benzindocarbocyanine** dye-linked **phosphoramidites**

INVENTOR(S): Brush, Charles K.; Anderson, Eric Dean

PATENT ASSIGNEE(S): Pharmacia Biotech Inc., USA

SOURCE: U.S., 23 pp., Cont.-in-part of U.S. Ser. No. 712,505, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

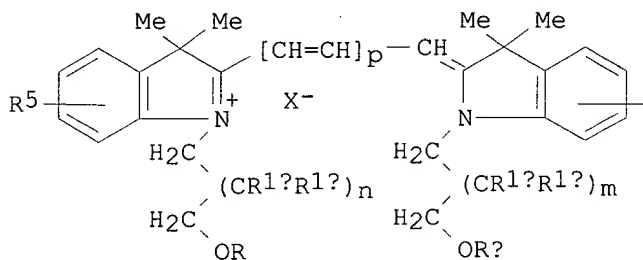
FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5808044	A	19980915	US 1997-799593	19970210
US 5556959	A	19960917	US 1994-265569	19940624
PRIORITY APPLN. INFO.:			US 1993-7444	19930122
			US 1994-265569	19940624
			US 1996-712505	19960911

OTHER SOURCE(S): MARPAT 129:216857

GI



general STR
is very
similar
to applicant's
applicant's
species

AB The title compds. [I; R = H, trityl, 4,4'-dimethoxytrityl, or acyl groups group or is an H; Ra = a **phosphoramidite** alkyl; R4, R5 = H, lower alkyl, acyl, $-(CH_2)_p-CH=CH-CH_2-OR$ or $-(CH_2)_q-CH_2-CO_2(CH_2)_qMe$; where p, q = an integer from 0 to 4; m, n = an integer from 0 to 10; p = 1, 2, or 3; X- = a neg. ion], which are useful for fluorescent, non-radioactive labeling of oligonucleotides in automated DNA sequencing, in situ detection of hybridization, etc., are prepd. Oligonucleotides I (R = aryl group-contg. moiety, which does not interfere with the attachment of an oligonucleotide at the Ra position; Ra = an oligonucleotide; R1a, R1b, R4, R5, m, n, p, X- = same as above) and method for linking a **fluorescent** label to an **oligonucleotide** are also claimed. Thus, a soln. of 28.15 g 1,3,3-trimethoxypropene in MeCN was added dropwise at 100.degree. over 1 h to a soln. of 110 g 1-(1'-acetoxypropyl)-2,3,3-trimethyl-(3H)-indolinium iodide, 24 mL Et3N, and 8 mL AcOH in MeCN, refluxed for 2 h, cooled, and evapd. to a gum, protecting

182873-67-2P 212563-53-6P 212563-54-7P
212563-58-1P

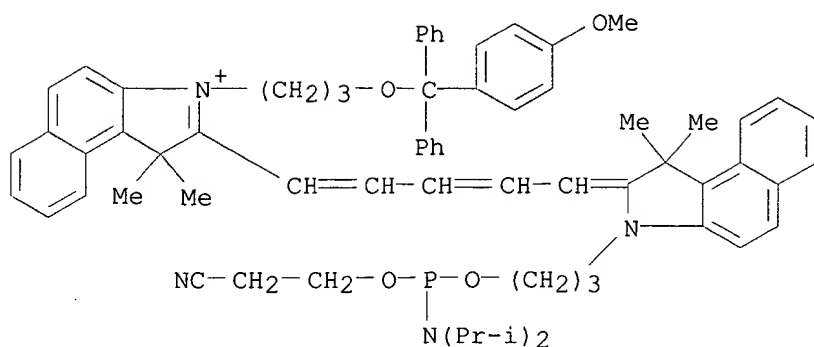
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

RN 182873-67-2 HCAPLUS

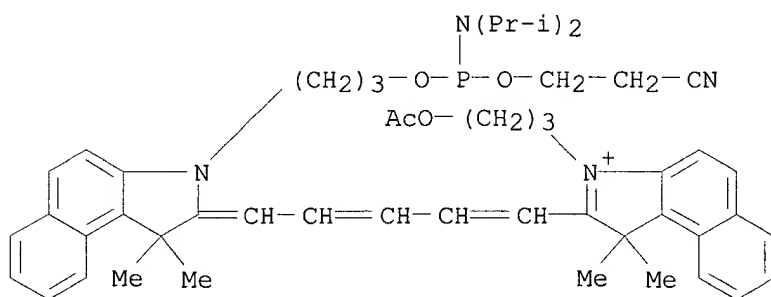
CN 3H-Indolium, 2-[5-[1-[3-[[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]oxy]propyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1,3-pentadienyl]-1-[3-[(4-methoxyphenyl)diphenylmethoxy]propyl]-3,3-dimethyl-, chloride (9CI) (CA INDEX NAME)



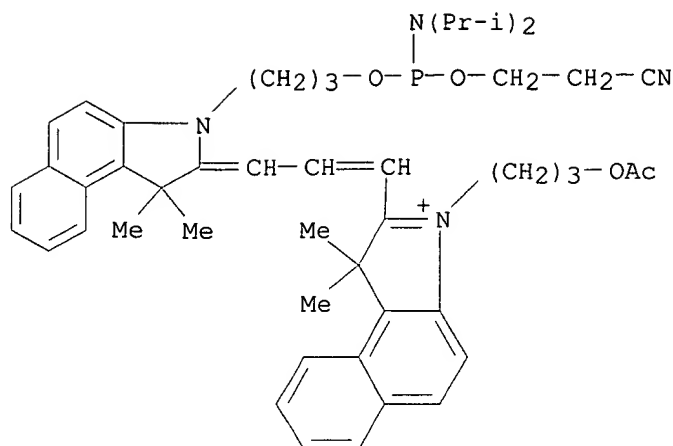
CN 1H-Benz[e]indolium, 2-[5-[3-[3-[[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]oxy]propyl]-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene]-1,3-pentadienyl]-3-[3-(4-methoxyphenyl)diphenylmethoxy]propyl]-1,1-dimethyl-, chloride (9CI) (CA INDEX NAME)



RN 212563-54-7 HCAPLUS
 CN 1H-Benz[e]indolium, 3-[3-(acetyloxy)propyl]-2-[5-[3-[3-[[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]oxy]propyl]-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene]-1,3-pentadienyl]-1,1-dimethyl-, chloride (9CI) (CA INDEX NAME)



RN 212563-58-1 HCAPLUS
 CN 1H-Benz[e]indolium, 3-[3-(acetyloxy)propyl]-2-[3-[3-[3-[[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]oxy]propyl]-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene]-1-propenyl]-1,1-dimethyl-, chloride (9CI) (CA INDEX NAME)



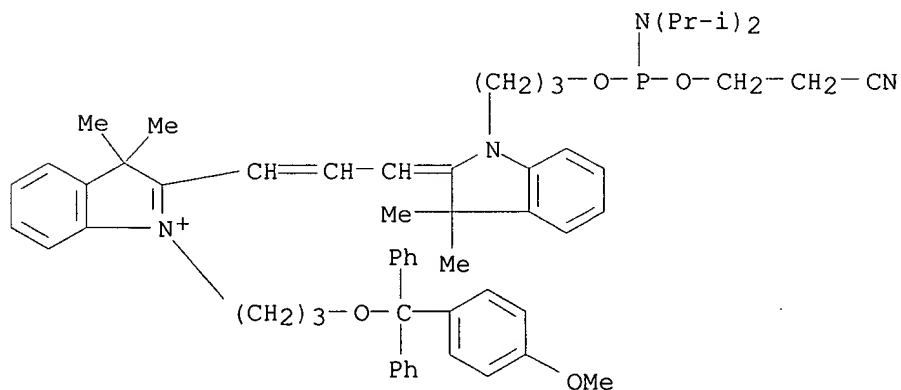
● Cl⁻

IT 182873-76-3P 182873-82-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of **indocarbocyanine** and **benzindocarbocyanine**
dye-linked **phosphoramidites** fluorescent, non-radioactive
labeling of oligonucleotides)

RN 182873-76-3 HCAPLUS

CN 3H-Indolium, 2-[3-[1-[3-[[[bis(1-methylethyl)amino] (2-
cyanoethoxy)phosphino]oxy]propyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-
ylidene]-1-propenyl]-1-[3-[(4-methoxyphenyl)diphenylmethoxy]propyl]-3,3-
dimethyl-, chloride (9CI) (CA INDEX NAME)



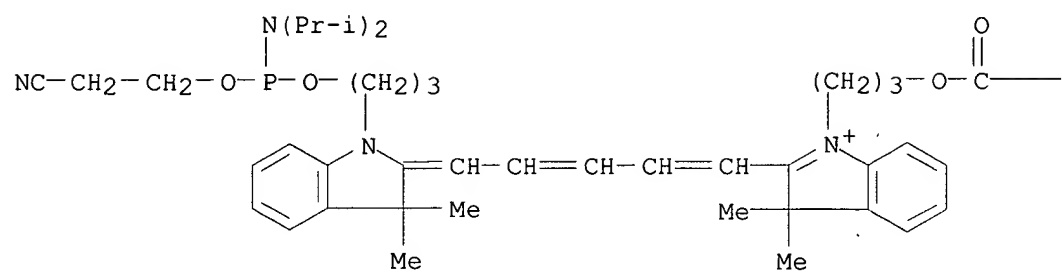
● Cl⁻

RN 182873-82-1 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[3-[[[bis(1-methylethyl)amino] (2-
cyanoethoxy)phosphino]oxy]propyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-
ylidene]-1,3-pentadienyl]-1-[3-(2,2-dimethyl-1-oxopropoxy)propyl]-3,3-

dimethyl-, chloride (9CI) (CA INDEX NAME)

PAGE 1-A



● Cl^-

PAGE 1-B

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L60 ANSWER 13 OF 17 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1997:466230 HCAPLUS

DOCUMENT NUMBER: 127:172704

TITLE: Stability, specificity and fluorescence brightness of multiply-labeled **fluorescent DNA** probes

AUTHOR(S): Randolph, John B.; Waggoner, Alan S.

CORPORATE SOURCE: Center Light Microscope Imaging Biotechnology
Department Chemistry, Carnegie Mellon University,
Pittsburgh, PA, 15213, USA

SOURCE: Nucleic Acids Research (1997), 25(14), 2923-2929
CODEN: NARHAD; ISSN: 0305-1048

PUBLISHER: Oxford University Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In this work, we studied the fluorescence and hybridization of multiply-labeled DNA probes which have the hydrophilic fluorophore 1-(.epsilon.-carboxypentynyl)-1'-ethyl-3,3,3',3'-**tetramethylindocarbocyanine-5,5'-disulfonate** (Cy3) attached via either a short or long linker at the C-5 position of deoxyuridine. We describe the effects of labeling d., fluorophore charge and linker length upon five properties of the probe: fluorescence intensity, the change in fluorescence upon duplex formation, the quantum yield of fluorescence (.PHI.f), probe-target stability and specificity. For the hydrophilic dye Cy3, we have demonstrated that the fluorescence intensity and .PHI.f are maximized when labeling every 6th base using the long linker. With a less hydrophilic dye, a labeling d. this high could not be achieved without serious quenching of the fluorescence. The target specificity of multiply-labeled DNA probes was just as high as compared to the unmodified control probe, however, a less stable probe-target duplex is formed that exhibits a lower melting temp. A mechanism that accounts for this destabilization is proposed which is consistent with our data. It involves dye-dye and dye-nucleotide interactions which appear to stabilize a single-stranded conformation of the probe.

IT 194159-49-4 194159-50-7

RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(stability, specificity, and fluorescence brightness of
multiply-labeled **fluorescent DNA** probes)

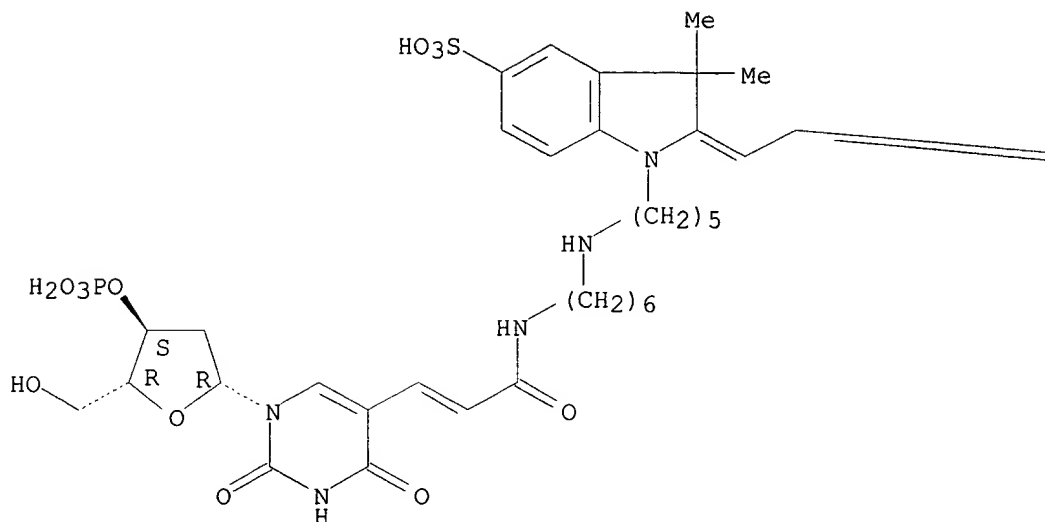
RN 194159-49-4 HCAPLUS

CN 3H-Indolium, 2-[3-[1-[5-[[6-[[3-[1-(2-deoxy-3-O-phosphono-.beta.-D-erythro-pentofuranosyl)-1,2,3,4-tetrahydro-2,4-dioxo-5-pyrimidinyl]-1-oxo-2-propenyl]amino]hexyl]amino]pentyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

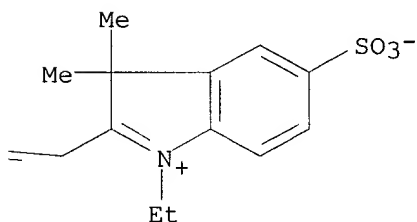
Absolute stereochemistry.

Double bond geometry unknown.

PAGE 1-A



PAGE 1-B

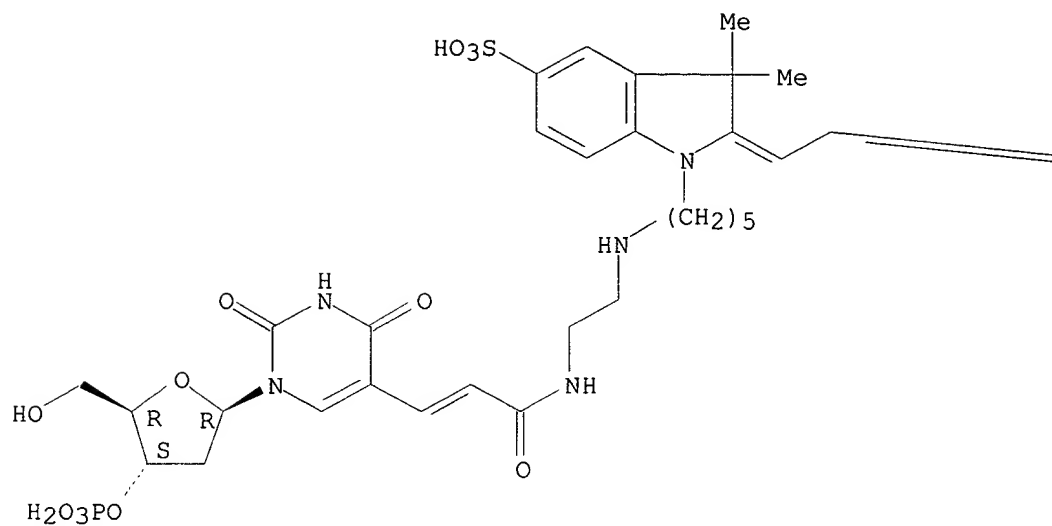


RN 194159-50-7 HCAPLUS

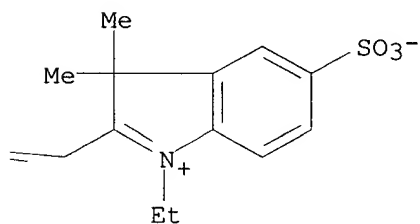
CN 3H-Indolium, 2-[3-[1-[5-[[2-[[3-[1-(2-deoxy-3-O-phosphono-.beta.-D-erythro-pentofuranosyl)-1,2,3,4-tetrahydro-2,4-dioxo-5-pyrimidinyl]-1-oxo-2-propenyl]amino]ethyl]amino]pentyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



PAGE 1-B



=> d ibib abs hitstr 160 14

L60 ANSWER 14 OF 17 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:610223 HCAPLUS

DOCUMENT NUMBER: 125:301494

TITLE: Preparation of **indocarbocyanine** dye-linked **phosphoramidites**

INVENTOR(S): Brush, Charles K.; Anderson, Eric D.

PATENT ASSIGNEE(S): Pharmacia P-L Biochemicals Inc., USA

SOURCE: U.S., 15 pp., Cont. of U.S. Ser. No. 7,444, abandoned.
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

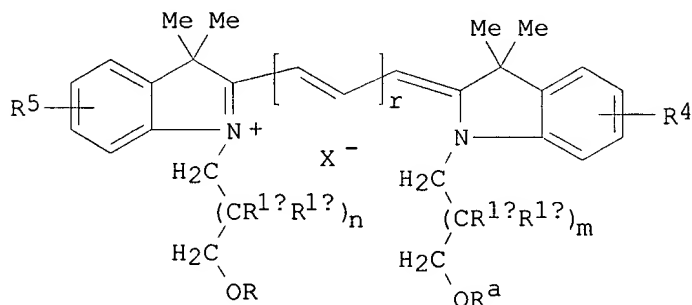
FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5556959	A	19960917	US 1994-265569	19940624
US 5808044	A	19980915	US 1997-799593	19970210
PRIORITY APPLN. INFO.:			US 1993-7444	19930122
			US 1994-265569	19940624
			US 1996-712505	19960911

OTHER SOURCE(S): MARPAT 125:301494

GI



I

AB The title compds. [I; R = H, trityl, 4-monomethoxytrityl, 4,4'-dimethoxytrityl, or acyl groups and R may be used as a protecting group or is an H; Ra = a **phosphoramidite**; R1a, R1b = H, lower alkyl; R4, R5 = H, lower alkyl, acyl, or (CH2)pCO2(CH2)qMe; where p, q = an integer from 0 to 4; m, n = an integer from 0 to 10; r = 1, 2, or 3; X- = a neg. ion], which are useful for fluorescent, non-radioactive labeling of oligonucleotides in automated DNA sequencing, in situ detection of hybridization, etc., are prepd. Oligonucleotides I (R = aryl group-contg. moiety, which does not interfere with the attachment of an oligonucleotides at the Ra position; Ra = an oligonucleotide; R1a, R1b, R4, R5, m, n, r, X- = same as above) and method for linking a **fluorescent** label to an **oligonucleotide** are also claimed. Thus, a soln. of 28.15 g 1,3,3-trimethoxypropene in MeCN was added dropwise at 100.degree. over 1 h to a soln. of 110 g 1-(1'-acetoxypropyl)-2,3,3-trimethyl-(3H)-indolinium iodide, 24 mL Et3N, and 8 mL AcOH in MeCN, refluxed for 2 h, cooled, and evapd. to a gum, which was dissolved in 2 M aq. HCl in 50:50 H2O/MeOH and stirred at room temp. overnight to give, after workup and silica gel chromatog., 60

g1,1'-bis(1''-hydroxy-3''-propyl)-3,3,3',3'-
tetramethylindodicarbocyanine chloride I (r = 2, n = m = 1, R = Ra
 = R1a = R1b = R4 = R5 = H). This compd. (6 g) was tritylated by
 monomethoxytrityl chloride in pyridine to give 3-4 g I (r = 2, n = m = 1,
 R = monomethoxytrityl, Ra = R1a = R1b = R4 = R5 = H), which (4.0 g) was
 condensed with 2.32 g NCCH₂CH₂P[N(CHMe₂)₂]₂ in MeCN to give the title
 compd. I (r = 2, n = m = 1, R = monomethoxytrityl, Ra =
 P[N(CHMe₂)₂]₂CH₂CH₂CN, R1a = R1b = R4 = R5 = H).

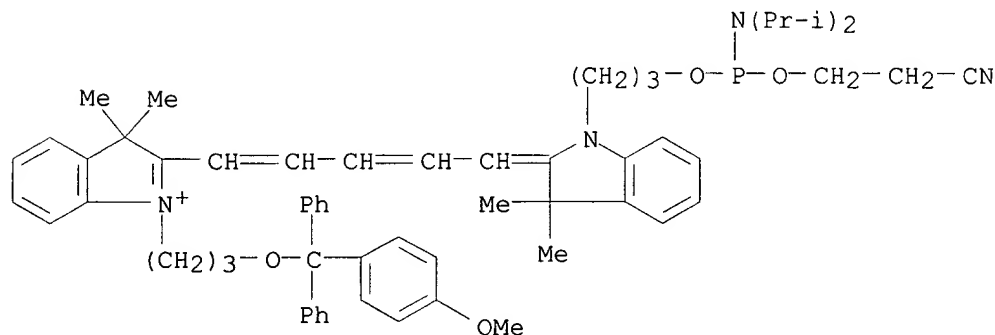
IT 182873-67-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)

(prepn. of **indocarbocyanine** dye-linked
phosphoramidites fluorescent, non-radioactive labeling of
 oligonucleotides)

RN 182873-67-2 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[3-[[[bis(1-methylethyl)amino](2-
 cyanoethoxy)phosphino]oxy]propyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-
 ylidene]-1,3-pentadienyl]-1-[3-[(4-methoxyphenyl)diphenylmethoxy]propyl]-
 3,3-dimethyl-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

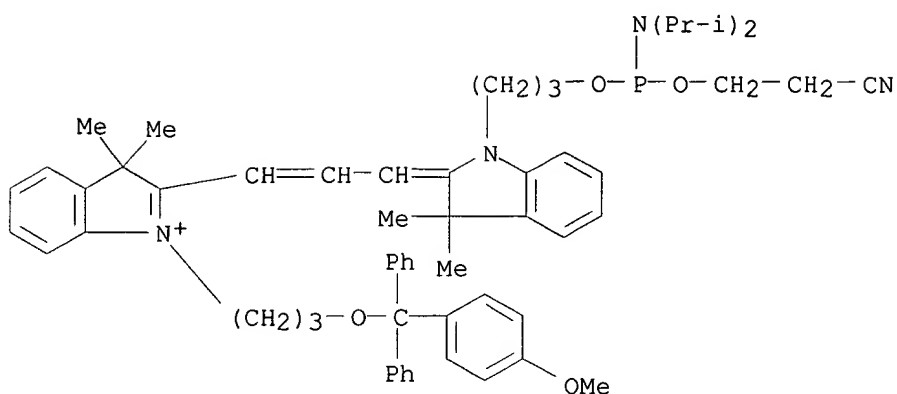
IT 182873-76-3P 182873-82-1P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of **indocarbocyanine** dye-linked
phosphoramidites fluorescent, non-radioactive labeling of
 oligonucleotides)

RN 182873-76-3 HCAPLUS

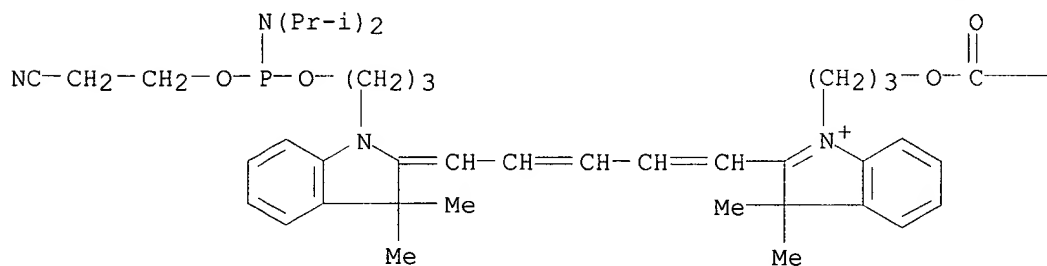
CN 3H-Indolium, 2-[3-[1-[3-[[[bis(1-methylethyl)amino](2-
 cyanoethoxy)phosphino]oxy]propyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-
 ylidene]-1-propenyl]-1-[3-[(4-methoxyphenyl)diphenylmethoxy]propyl]-3,3-
 dimethyl-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

RN 182873-82-1 HCAPLUS
 CN 3H-Indolium, 2-[5-[1-[3-[[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]oxy]propyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1,3-pentadienyl]-1-[3-(2,2-dimethyl-1-oxopropoxy)propyl]-3,3-dimethyl-, chloride (9CI) (CA INDEX NAME)

PAGE 1-A



● Cl⁻

PAGE 1-B

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L60 ANSWER 15 OF 17 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1995:3281 HCAPLUS

DOCUMENT NUMBER: 122:155746

TITLE: Fluorescent dyes for labeling biosubstances for analysis

INVENTOR(S): Katayose, Mitsuo; Tai, Seiji; Watanabe, Hiroo

PATENT ASSIGNEE(S): Hitachi Chemical Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05287209	A2	19931102	JP 1992-88743	19920409

OTHER SOURCE(S): MARPAT 122:155746

GI For diagram(s), see printed CA Issue.

AB The fluorescent dyes I (A1, A2 = benzene, naphthalene, etc.; R1-3 = H, alkyl, alkoxy; X1 = S, O, etc.; X2 = S, O, CO, etc.; and L = polymethylene) and biosubstance (e.g. vitamin, nucleotide, or protein) labeled with the fluorescent dye are prepd. and used for antigen, pharmaceutical, or DNA anal. Four such fluorescent dyes, their sulfonylchloride derivs. and p-aminobenzoic acid adducts, and 3-(4-aminobutyl)morphine labeled with these dyes were prepd. for morphine anal. A labeled DNA probe, i.e. GTTTCCTCAGTCACGAC, was also prepd. for DNA sequence anal. The detection of the dye is not affected by heme in blood and is therefore a good test reagent for clin. anal.

IT 154187-63-0P 154187-64-1P 161066-73-5P

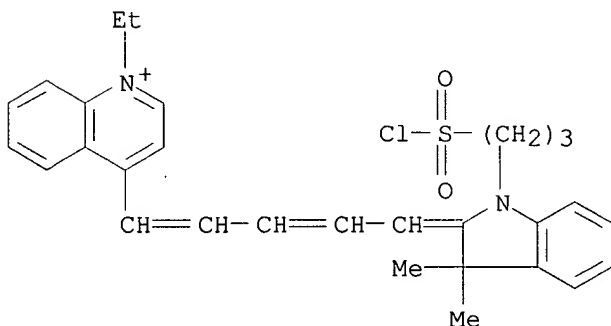
161066-74-6P 161098-14-2P 161098-15-3P

RL: SPN (Synthetic preparation); PREP (Preparation)

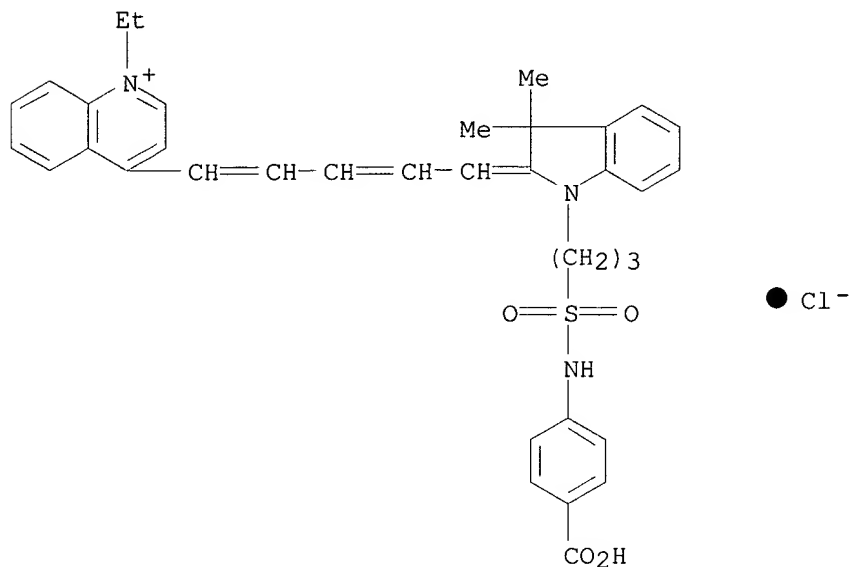
(prepn. of, as label, for biosubstance detn.)

RN 154187-63-0 HCAPLUS

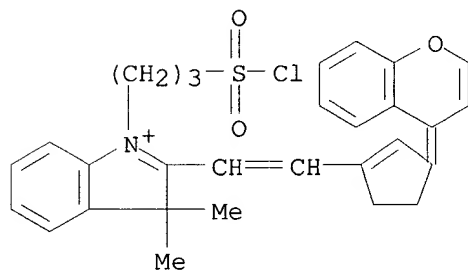
CN Quinolinium, 4-[5-[1-[3-(chlorosulfonyl)propyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-, chloride (9CI) (CA INDEX NAME)

Cl⁻

RN 154187-64-1 HCAPLUS
 CN Quinolinium, 4-[5-[1-[3-[(4-carboxyphenyl)amino]sulfonyl]propyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-, chloride (9CI) (CA INDEX NAME)



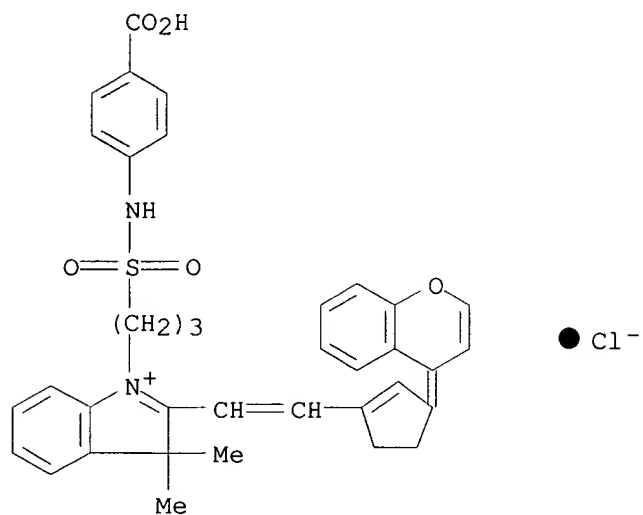
RN 161066-73-5 HCAPLUS
 CN 3H-Indolium, 1-[3-(chlorosulfonyl)propyl]-3,3-dimethyl-2-[2-[3-(methyl-4H-1-benzopyran-4-ylidene)-1-cyclopenten-1-yl]ethenyl]-, chloride (9CI) (CA INDEX NAME)



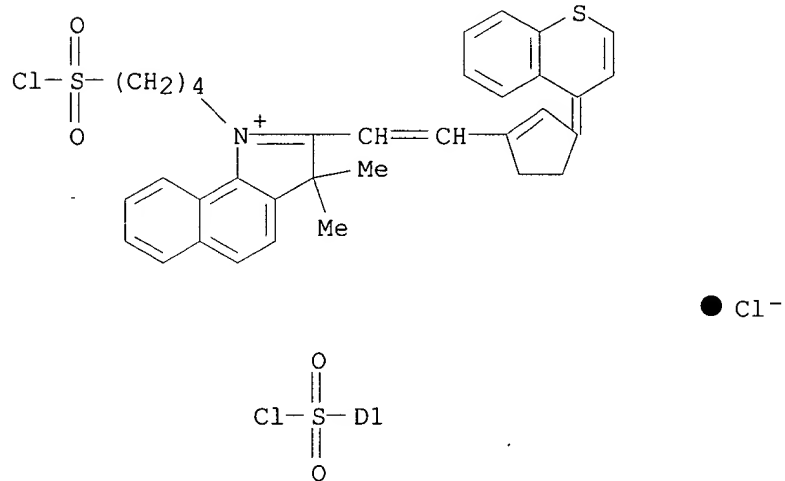
D1- Me

● Cl⁻

RN 161066-74-6 HCAPLUS
 CN 3H-Indolium, 1-[3-[(4-carboxyphenyl)amino]sulfonyl]propyl]-3,3-dimethyl-2-[2-[3-(methyl-4H-1-benzopyran-4-ylidene)-1-cyclopenten-1-yl]ethenyl]-, chloride (9CI) (CA INDEX NAME)

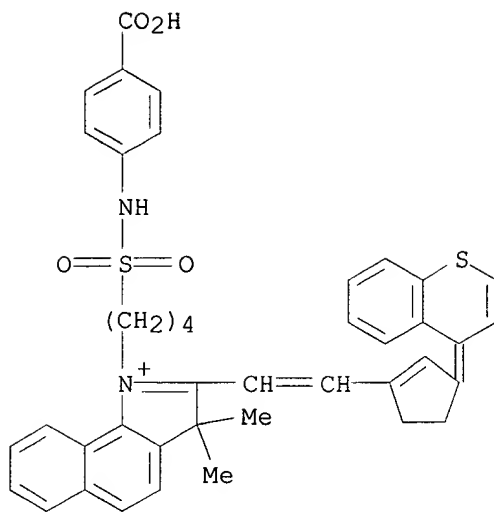


RN 161098-14-2 HCAPLUS
 CN 3H-Benz[g]indolium, (chlorosulfonyl)-1-[4-(chlorosulfonyl)butyl]-3,3-dimethyl-2-[2-[3-(methyl-4H-1-benzothiopyran-4-ylidene)-1-cyclopenten-1-yl]ethenyl]-, chloride (9CI) (CA INDEX NAME)

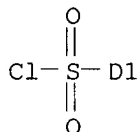


RN 161098-15-3 HCAPLUS
 CN 3H-Benz[g]indolium, 1-[4-[[(4-carboxyphenyl)amino]sulfonyl]butyl] (chlorosulfonyl)-3,3-dimethyl-2-[2-[3-(methyl-4H-1-benzothiopyran-4-ylidene)-1-cyclopenten-1-yl]ethenyl]-, chloride (9CI) (CA INDEX NAME)

PAGE 1-A



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D1-Me

● Cl⁻

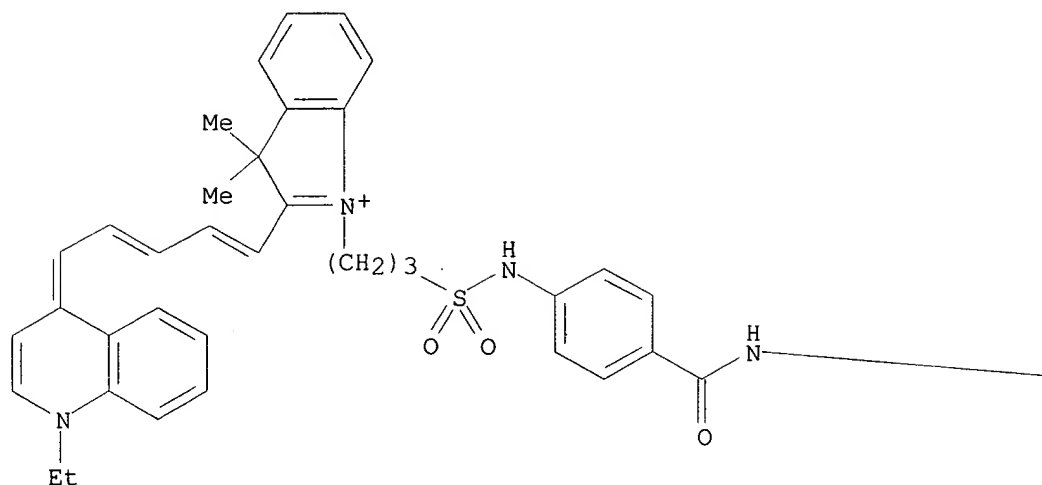
IT 158019-49-9P 158019-50-2P 158019-51-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for morphine detn.)

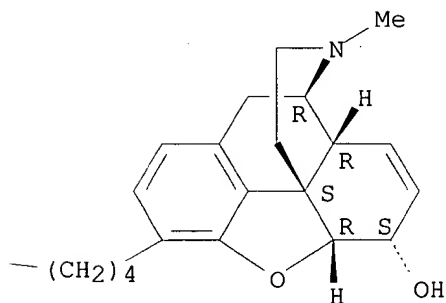
RN 158019-49-9 HCAPLUS

CN 3H-Indolium, 1-[3-[[[4-[[[4-[(5.alpha.,6.alpha.)-7,8-didehydro-4,5-epoxy-6-hydroxy-17-methylmorphinan-3-yl]butyl]amino]carbonyl]phenyl]amino]sulfonyl]propyl]-2-[5-(1-ethyl-4(1H)-quinolinylidene)-1,3-pentadienyl]-3,3-dimethyl-, chloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



● Cl⁻

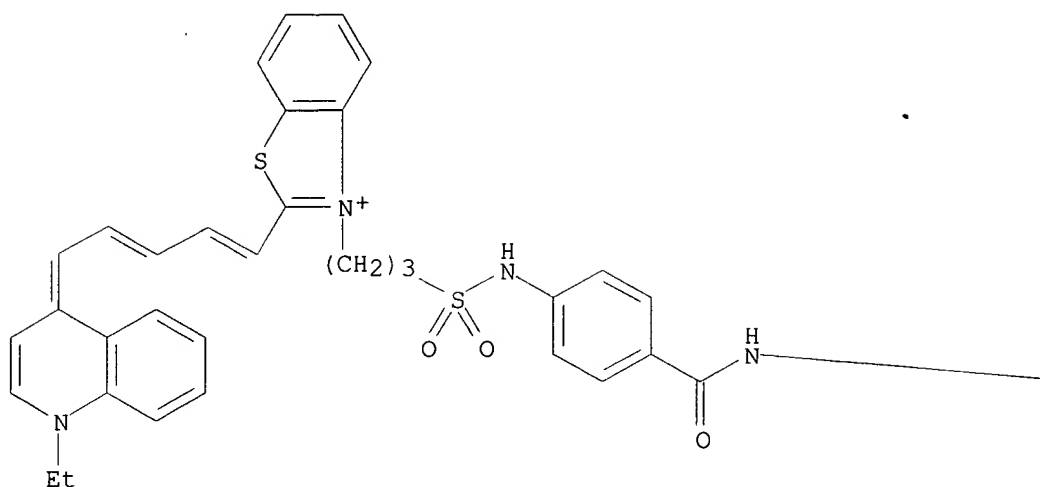


RN 158019-50-2 HCAPLUS

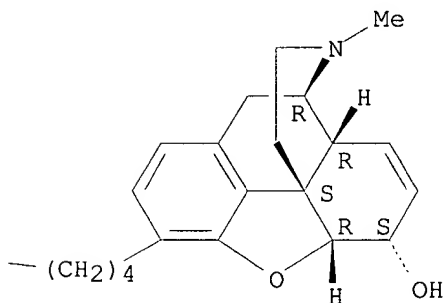
CN Benzothiazolium, 3-[3-[[[4-[[[4-[(5.alpha.,6.alpha.)-7,8-didehydro-4,5-epoxy-6-hydroxy-17-methylmorphinan-3-yl]butyl]amino]carbonyl]phenyl]amino]sulfonyl]propyl]-2-[5-(1-ethyl-4(1H)-quinolinylidene)-1,3-pentadienyl]-, chloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A

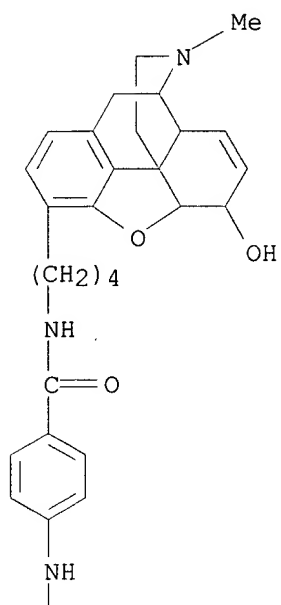

● Cl⁻

PAGE 1-B

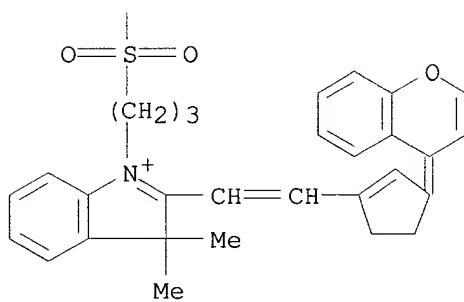


RN 158019-51-3 HCAPLUS
 CN 3H-Indolium, 1-[3-[[[4-[[[4-[(5.alpha.,6.alpha.),7,8-didehydro-4,5-epoxy-6-hydroxy-17-methylmorphinan-3-yl]butyl]amino]carbonyl]phenyl]amino]sulfonyl]propyl]-3,3-dimethyl-2-[2-[3-(methyl-4H-1-benzopyran-4-ylidene)-1-cyclopenten-1-yl]ethenyl]-, chloride (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



D1-Me

● Cl^-

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L60 ANSWER 16 OF 17 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1994:527040 HCAPLUS

DOCUMENT NUMBER: 121:127040

TITLE: Chromogenic **mononucleotide** analogs for
DNA probe

INVENTOR(S): Tomita, Yoshinori; Mihara, Cheko; Okamoto, Hisashi

PATENT ASSIGNEE(S): Canon Kk, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

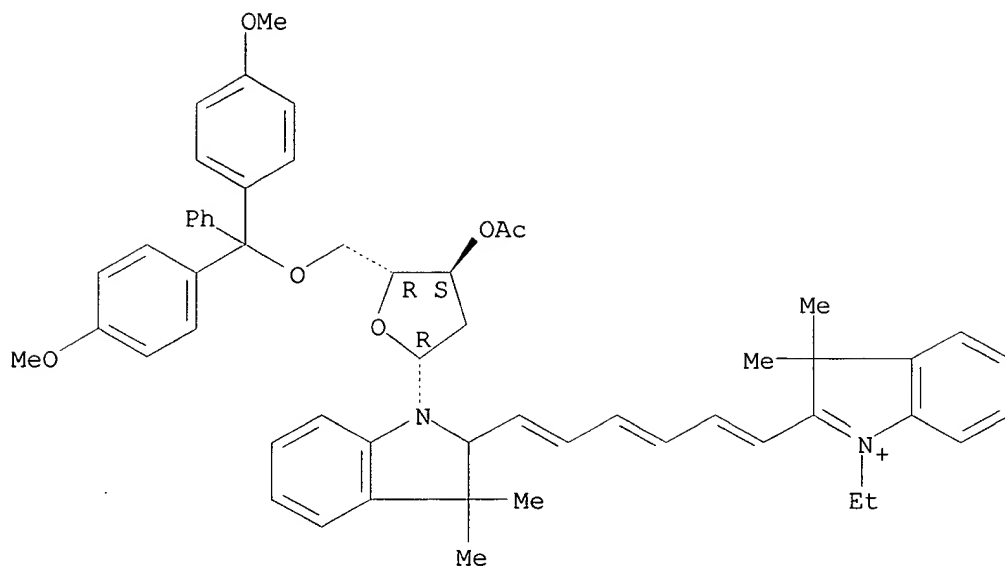
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 06122696	A2	19940506	JP 1992-272914	19921012
AB	The chromogenic mononucleotide analogs comprise dye, phosphate group, and carbohydrate moiety. Thus, 1-{1,1-dimethyl-2-[7-(1,1-dimethyl-3-ethyl-indolin-2-ylidene)-1,3,5-heptatrienyl]-1H-indolium iodide}-3'-(.beta.-cyanoethyl-N,N-diisopropylphosphoramidate)-5'-dimethoxytrityl-2'-deoxy-D-ribose was synthesized. from 2,3,3-trimethyl-indolenin, Et iodide, 1-iodo-5-dimethoxytrityl-2-deoxy-D-ribose, etc., and used for prepg. dye-label DNA probe.				
IT	157132-15-5P 157132-16-6P 157132-21-3P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation) (prepn. and reaction of, in prepg. chromogenic mononucleotide analogs for DNA probe)				
RN	157132-15-5 HCAPLUS				
CN	3H-Indolium, 2-[6-[1-[3-O-acetyl-5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-2,3-dihydro-3,3-dimethyl-1H-indol-2-yl]-1,3,5-hexatrienyl]-1-ethyl-3,3-dimethyl-, iodide (9CI) (CA INDEX NAME)				

Absolute stereochemistry.

Double bond geometry unknown.

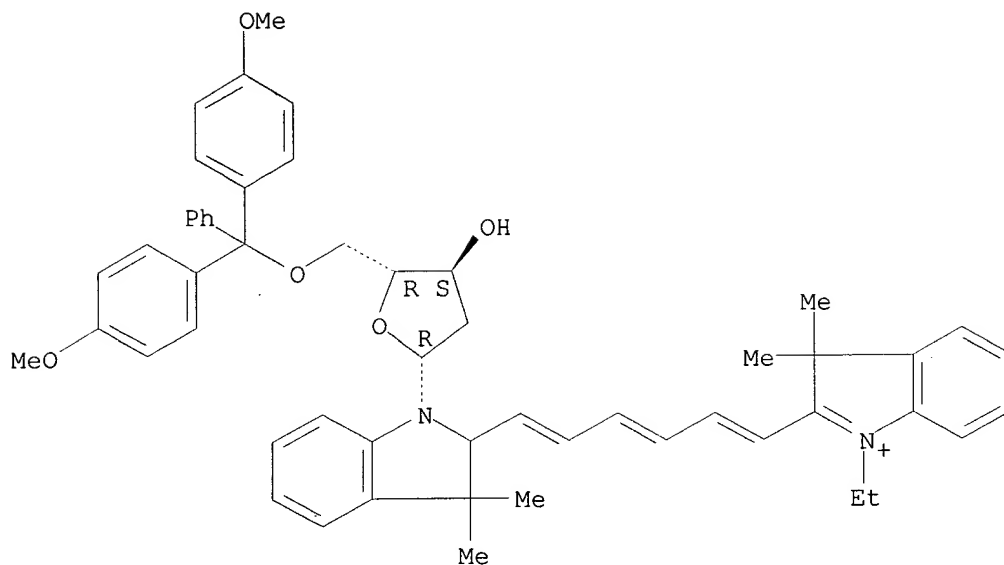
● I⁻

RN 157132-16-6 HCAPLUS

CN 3H-Indolium, 2-[6-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-
 .beta.-D-erythro-pentofuranosyl]-2,3-dihydro-3,3-dimethyl-1H-indol-2-yl]-
 1,3,5-hexatrienyl]-1-ethyl-3,3-dimethyl-, iodide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

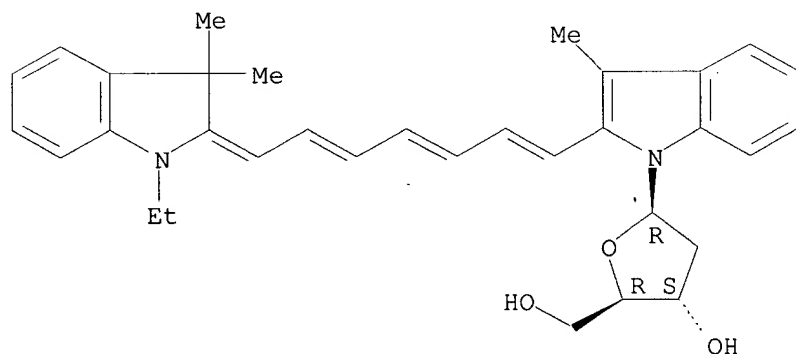
Double bond geometry unknown.



● I⁻

RN 157132-21-3 HCAPLUS
 CN 1H-Indole, 2-[7-[1-(2-deoxy-β-D-erythro-pentofuranosyl)-3-methyl-1H-indol-2-yl]-2,4,6-heptatrienylidene]-1-ethyl-2,3-dihydro-3,3-dimethyl-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.

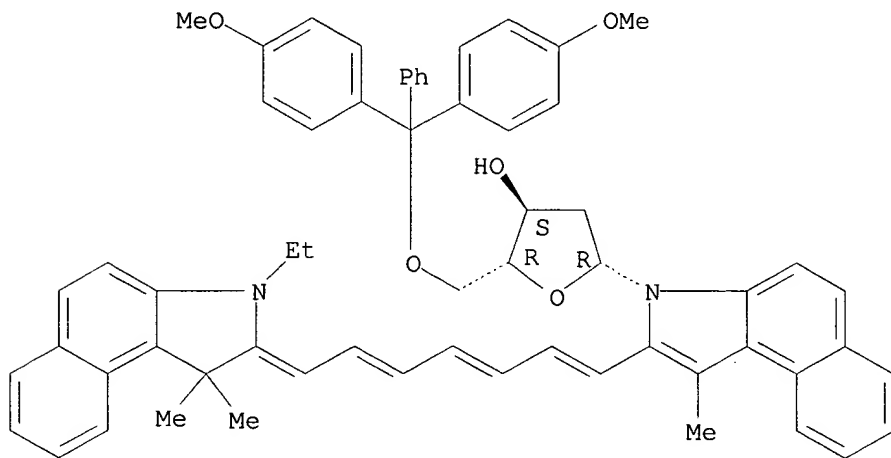


IT 157132-20-2P
 RL: PREP (Preparation)
 (prepn. of, as chromogenic **mononucleotide** analogs for
 DNA probe)

RN 157132-20-2 HCAPLUS

CN 1H-Benz[e]indole, 2-[7-[3-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-1-methyl-1H-benz[e]indol-2-yl]-2,4,6-heptatrienylidene]-3-ethyl-2,3-dihydro-1,1-dimethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

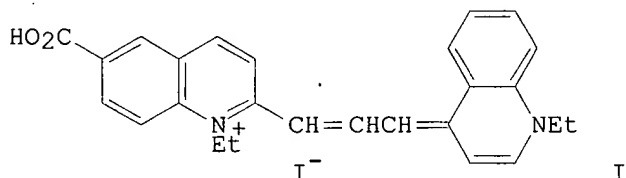


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L60 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1982:451808 HCAPLUS
 DOCUMENT NUMBER: 97:51808
 TITLE: Photographic microquantitation of enzymes
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 31 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57047493	A2	19820318	JP 1980-120600	19800902
JP 61001118	B4	19860114		
EP 48834	A1	19820407	EP 1981-106826	19810901
EP 48834	B1	19850619		
R: CH, DE, FR, GB				
US 4414325	A	19831108	US 1981-298814	19810902
PRIORITY APPLN. INFO.:			JP 1980-120600	19800902

GI



AB A synthetic substrate (having a mol. structure that specifically reacts with the enzyme to be detd. and also that has a spectral sensitizing mol. structure) is contacted with the enzyme to be detd. Then, either the enzymic reaction product or the unreacted synthetic substrate remaining is reacted with an Ag halide, exposed to the spectrum of light that corresponds to the spectral sensitivity of the substrate, photog. developed, and the concn. of the Ag image and (or) the color developed is detd. as an enzyme activity and (or) the enzymic content of the sample. This method is suitable for detg. protein-decompg. enzymes, peptide-decompg. enzymes, **nucleic** acid-decompg. enzymes, sugar-decompg. enzymes, and lipid-decompg. enzymes. Thus, 1 mL each of I-modified glycyphenylalaninamide (1 mg/mL) in 0.05M Tris-HCl buffer (pH 8.5) contg. 1% surfactant and bovine pancreas .alpha.-chymotrypsin at 2, 20, and 200 pg/mL in 0.05M Tris-HCl buffer (pH 8.5) were mixed, incubated at 40.degree. for 5 min, and mixed with 0.1 mg tosylamidophenylalanylchloromethylketone to stop the enzyme reaction. Each reaction mixt. was passed through CM-Sephadex C-50, the column washed with 1 mL 0.05M Tris-HCl buffer (pH 8.5) and the eluent and washings collected. The collected liq. (25 .mu.L each) was applied to the unexposed AgBrCl film in a spot 5 mm diam. The film was allowed to stand at room temp. in the dark for 20 min and exposed to a light through Fuji Film Filter SC-66 at 108 lx for 10-3 s, conventionally developed, and the intensity of darkness of the spot detd. The darkness of the spots was

directly proportional to the concn. of .alpha.-chymotrypsin.

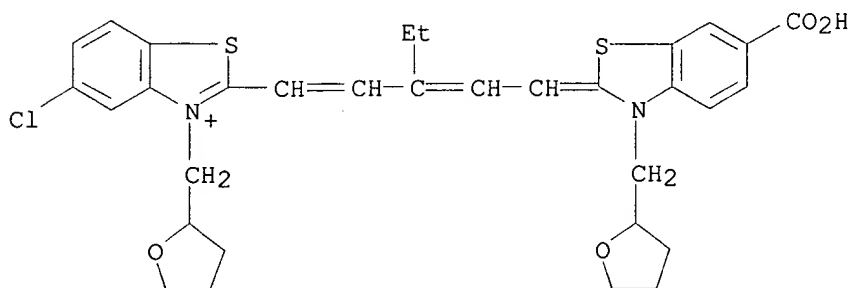
IT 82458-83-1 82458-91-1

RL: BIOL (Biological study)

(spectral sensitizing pigment, for enzyme assay)

RN 82458-83-1 HCAPLUS

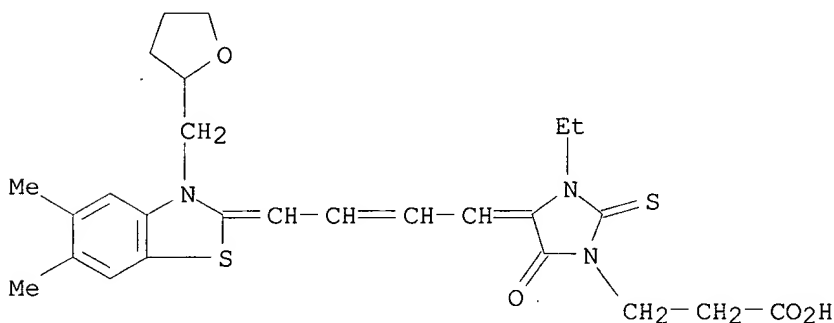
CN Benzothiazolium, 2-[5-[6-carboxy-3-[(tetrahydro-2-furanyl)methyl]-2(3H)-benzothiazolylidene]-3-ethyl-1,3-pentadienyl]-5-chloro-3-[(tetrahydro-2-furanyl)methyl]-, iodide (9CI) (CA INDEX NAME)



● I⁻

RN 82458-91-1 HCAPLUS

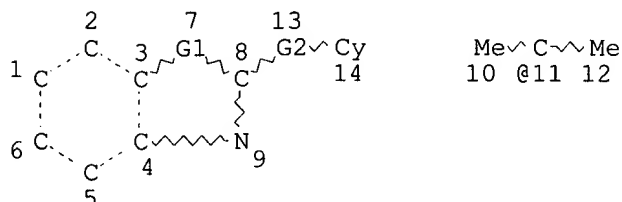
CN 1-Imidazolidinepropanoic acid, 4-[4-[5,6-dimethyl-3-[(tetrahydro-2-furanyl)methyl]-2(3H)-benzothiazolylidene]-2-butenylidene]-3-ethyl-5-oxo-2-thioxo- (9CI) (CA INDEX NAME)



MAUPIN 09/829,467

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L15 16673 SEA FILE=HCAPLUS ABB=ON PLU=ON ?STYRYL?
 L16 863910 SEA FILE=HCAPLUS ABB=ON PLU=ON (DNA OR ?NUCLEOTID? OR
 NUCLEIC)
 L18 18654 SEA FILE=HCAPLUS ABB=ON PLU=ON (SULFONATES/CT OR SULFONATION/
 CT OR "SULFONIC ACIDS"/CT)
 L19 6154 SEA FILE=HCAPLUS ABB=ON PLU=ON "PHOSPHATES, BIOLOGICAL
 STUDIES"/CT
 L34 STR



VAR G1=O/S/11
 REP G2=(2-9) C
 NODE ATTRIBUTES:
 CONNECT IS E3 RC AT 8
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L36 45490 SEA FILE=REGISTRY SSS FUL L34
 L39 4949 SEA FILE=REGISTRY ABB=ON PLU=ON L36 AND ?SULFON?/CNS
 L40 639 SEA FILE=REGISTRY ABB=ON PLU=ON L36 AND ?PHOSPH?/CNS
 L41 39918 SEA FILE=REGISTRY ABB=ON PLU=ON L36 NOT (L39 OR L40)
 L42 561 SEA FILE=REGISTRY ABB=ON PLU=ON L41 AND OC4/ES
 L46 8330 SEA FILE=HCAPLUS ABB=ON PLU=ON L16(3A)FLUORES?
 L50 68099 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 OR ?CYANINE?
 L61 39357 SEA FILE=REGISTRY ABB=ON PLU=ON L41 NOT L42
 L62 15024 SEA FILE=HCAPLUS ABB=ON PLU=ON L61
 L63 266 SEA FILE=HCAPLUS ABB=ON PLU=ON L46 AND L62
 L64 74 SEA FILE=HCAPLUS ABB=ON PLU=ON L63 AND ?CONJUGAT?
 L65 21 SEA FILE=HCAPLUS ABB=ON PLU=ON L64 AND L50
 L66 26 SEA FILE=HCAPLUS ABB=ON PLU=ON L64 AND ((L18 OR L19) OR
 ?SULFON? OR ?PHOSPH?)
 L67 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L65 AND L66
 L68 18 SEA FILE=HCAPLUS ABB=ON PLU=ON L66 NOT L67

=> d ibib abs hitstr 168 1

L68 ANSWER 1 OF 18 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2002:172235 HCAPLUS
 DOCUMENT NUMBER: 136:213182
 TITLE: Methods employing fluorescence quenching by metal surfaces
 INVENTOR(S): Dubertret, Benoit; Calame, Michel; Libchaber, Albert
 PATENT ASSIGNEE(S): The Rockefeller University, USA
 SOURCE: PCT Int. Appl., 62 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002018951	A2	20020307	WO 2001-US41941	20010829
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

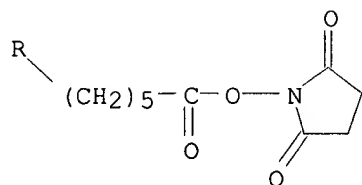
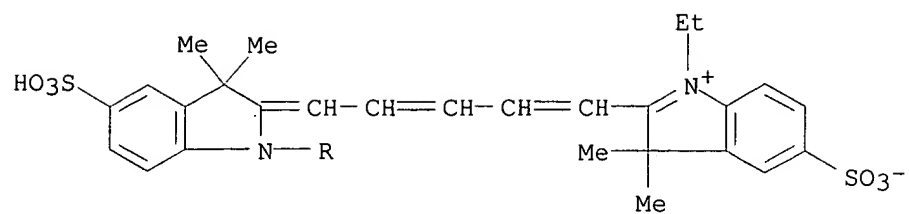
PRIORITY APPLN. INFO.: US 2000-228728P P 20000829
 US 2001-280350P P 20010330

AB The invention is broadly related to methods for sensitively detecting proximity changes in systems that utilize an interacting fluorophore and quencher. In such methods, a metal surface is used as the quencher. The metal surface may be a particle or film, such as nanoparticles or a coating, resp. Such systems provide an increase in sensitivity over previously-described quenchers, offering a signal-to-noise ratio of up to several orders of magnitude. Examples of such systems in which proximity changes are usefully detected include conformational changes in biomols. resulting from their interaction with their binding partners or ligands. Such biomols. may be, for example, nucleic acids, proteins, peptides, polysaccharides, or other polymeric, naturally-occurring or synthetic mols. These include, by way of non-limiting example, mol. beacons, which detect particular polynucleotide sequences; antibody-antigen interactions, and conformational changes in proteins upon binding to a ligand or substrate. A hairpin loop ssDNA was covalently linked to gold nanoparticles and to different fluorophores and the construct was used in single mismatch detection.

IT **146368-14-1**, Cy5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (methods employing fluorescence quenching by metal surfaces)

RN 146368-14-1 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



=> d ibib abs hitstr 168 2

L68 ANSWER 2 OF 18 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:767507 HCAPLUS

DOCUMENT NUMBER: 135:315603

TITLE: DNA **conjugate** with functional substance

INVENTOR(S): Musha, Kiyoshi; Saito, Masako; Ikeshima, Tetsuya

PATENT ASSIGNEE(S): Asahi Denka Kogyo K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

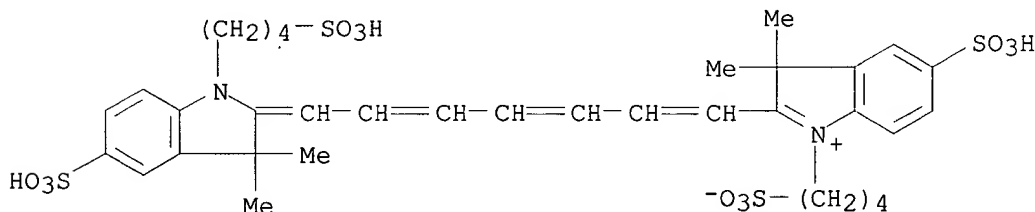
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 2001294597	A2	20011023	JP 2000-110909	20000412

AB A method is provided for prepn. of a functional substance-incorporated DNA complex. Substances absorbing UV light, visible light, near IR light, or chromophore are incorporated. Fluorescence or **phosphorescence** emitting substances, thermochromism causing substances, chem. reaction causing substances, or conductive substances, are also used. DNA **conjugates** with bisphenol A, Sirius Yellow GC, benzopurpurine 4B, ADK Stab AQ 20, ADK Stab LA 32, ADK Stab 1413, 1-ethyl-4-[3-(1-ethyl-4(1H)quinolinylidene)-1-propenyl]quinolinium iodide, and 2-[7-(1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene)-1,3,5-heptatrienyl]-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-3H-indolium hydroxide, inner salt, trisodium salt, were prepd.

IT **121186-51-4D**, DNA **conjugate** with
 RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
 (DNA **conjugate** with functional substance)

RN 121186-51-4 HCAPLUS

CN 3H-Indolium, 2-[7-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-, inner salt, trisodium salt (9CI) (CA INDEX NAME)



● 3 Na

=> d ibib abs hitstr 168 3

L68 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:729821 HCAPLUS

DOCUMENT NUMBER: 135:254117

TITLE: Determination of DNA binding activity of DNA binding proteins

INVENTOR(S): Kulesz-Martin, Molly F.; Liu, Yuangang

PATENT ASSIGNEE(S): Health Research, Inc., USA

SOURCE: Eur. Pat. Appl., 26 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1138781	A2	20011004	EP 2001-106806	20010319
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001321199	A2	20011120	JP 2001-103067	20010402

PRIORITY APPLN. INFO.: US 2000-539945 A 20000331

AB A method is described for quantifying a DNA binding protein in a biol. sample. The method may be used in the absence of radioisotopes, and at a sensitivity greater than the commonly used electrophoretic mobility shift assay (EMSA) method previously discussed. In particular, the method includes the steps of: (a) treating the sample to obtain a liq. to be tested for the DNA binding protein, (b) incubating the liq. contg. the DNA binding protein with a DNA, contg. a binding sequence to which DNA binding protein can specifically bind so that DNA binding protein specifically binds to the DNA, (c) sepg. the DNA with bound DNA binding protein from other DNA and proteins in the liq., and (e) quantifying the DNA binding protein without interference from other proteins of similar mol. wt. in the absence of the use of a radioisotope, and at a sensitivity greater than EMSA. The amt. of DNA binding protein may be quantified in several ways, e.g. directly by immunoreaction to the DNA binding protein or indirectly by amplification of DNA specifically bound to the binding protein followed by quantification of the amplified DNA. In a further embodiment of the invention, the total protein in the sample, having at least one specific immunoreactive site in common with the DNA binding protein, is quantified and compared with the quantity of binding protein to give an indication of relative proportions of bound and unbound protein in the total protein. The present invention esp. relates to methods and kits applicable for the quantification of DNA binding activity of DNA binding proteins for use in both clin. and lab. settings. Such quantifications may be used both fo research and for reliable prognostic indicators in many disease, e.g., cancer.

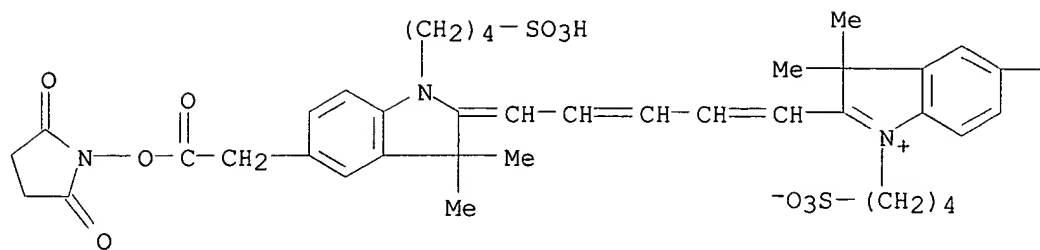
IT 144377-05-9 146397-20-8, cy3

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(DNA binding activity of DNA binding proteins detn.)

RN 144377-05-9 HCAPLUS

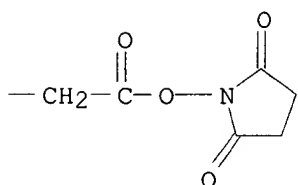
CN 3H-Indolium, 5-[2-[(2,5-dioxo-1-pyrrolidinyl)oxy]-2-oxoethyl]-2-[5-[5-[2-[(2,5-dioxo-1-pyrrolidinyl)oxy]-2-oxoethyl]-1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na

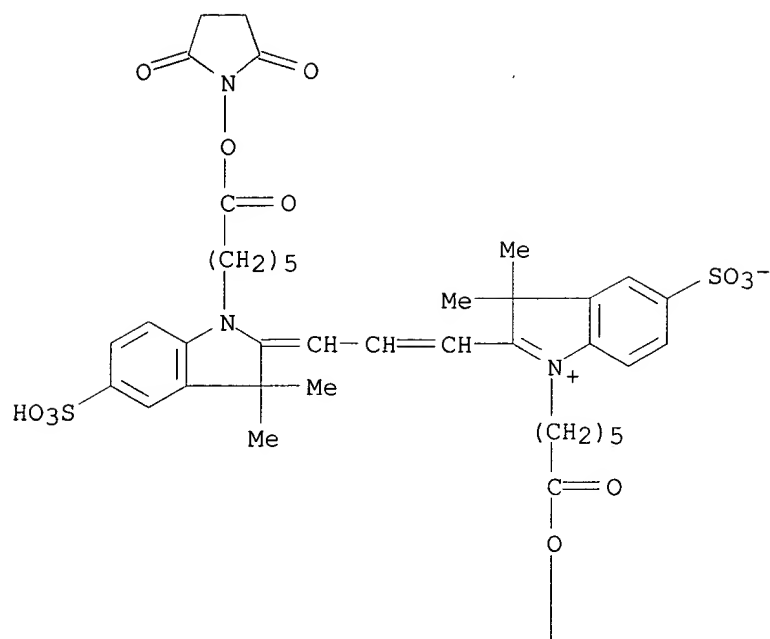
PAGE 1-B



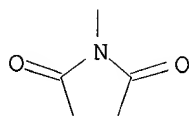
RN 146397-20-8 HCAPLUS

CN 3H-Indolium, 1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



=> d ibib abs hitstr 168 4

L68 ANSWER 4 OF 18 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:713617 HCAPLUS

DOCUMENT NUMBER: 135:268132

TITLE: Microarray-based analysis of polynucleotide sequence variations using groups of primers immobilized on solid phase support

INVENTOR(S): Yu, Zailin; Peng, Zaoyuan; Hu, Qianjin

PATENT ASSIGNEE(S): Mergen Ltd., USA

SOURCE: PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

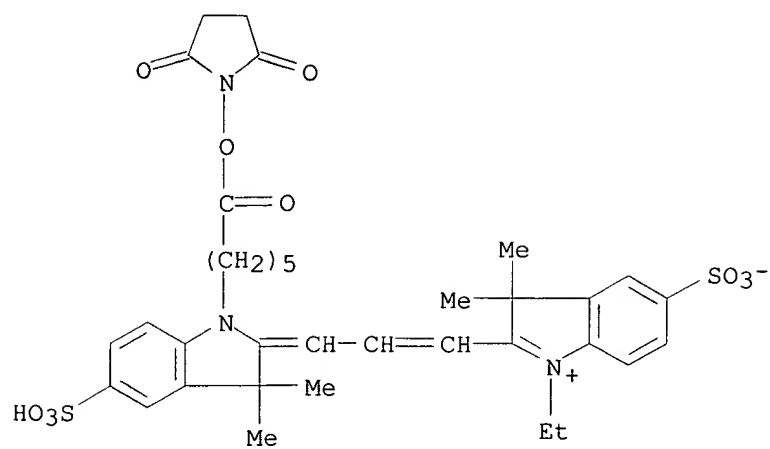
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001071041	A2	20010927	WO 2001-US9165	20010320
WO 2001071041	A3	20020718		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6376191	B1	20020423	US 2000-707366	20001106
US 2002086322	A1	20020704	US 2001-8560	20011205
PRIORITY APPLN. INFO.:			US 2000-191356P	P 20000322
			US 2000-707366	A2 20001106

AB Solid phase polymerase-mediated amplification approaches using immobilized primers on a microarray are provided for detecting sequence variations in a target polynucleotide as compared to a ref. sequence. The group of primers is selected to span a particular region of the ref. sequence and comprises at least four sets of primers: a first set that is exactly complementary to the ref. sequence; and three addnl. sets of primers, each of which is identical to the first set of primers but for the nucleotides at 3'-end, which is different in each of the three sets. The invention provides kit, DNA polymerase, dNTP for detection of sequence variations. The invention can be used to detect sequence variation between a target polynucleotide and a ref. sequence, including single or multiple base substitution, deletion or insertions, and other more complex variations. The methods and compns. provided herein are useful for research and clin. applications, particularly for large scale assays of genetic information in biol. samples of interest.

IT **146368-16-3**
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (Cy3, antibody **conjugated** with; microarray-based anal. of polynucleotide sequence variations using groups of primers immobilized on solid phase support)

RN 146368-16-3 HCAPLUS
 CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



=> d ibib abs hitstr 168 5

L68 ANSWER 5 OF 18 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2001:636252 HCAPLUS
 DOCUMENT NUMBER: 135:206422
 TITLE: Ligase/polymerase method for detecting cytosine
 methylation in DNA samples
 INVENTOR(S): Olek, Alexander; Berlin, Kurt
 PATENT ASSIGNEE(S): Epigenomics A.-G., Germany
 SOURCE: PCT Int. Appl., 41 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001062961	A1	20010830	WO 2001-DE749	20010223
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG DE 10010281 A1 20010906 DE 2000-10010281 20000225				

PRIORITY APPLN. INFO.: DE 2000-10010281 A 20000225

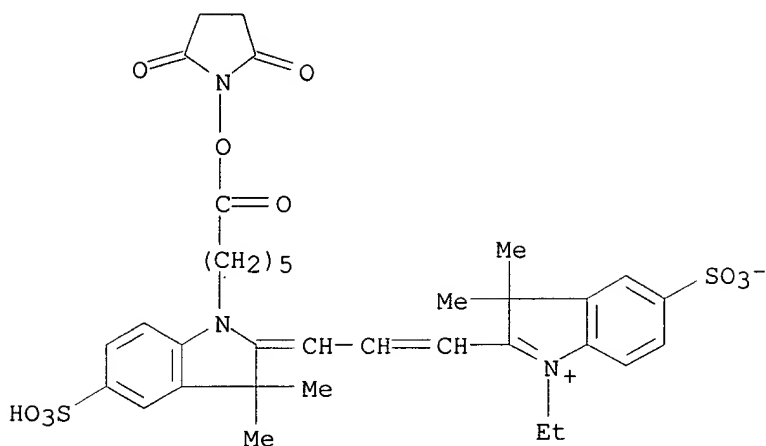
AB The invention relates to a method for detecting 5-methylcytosine in genomic DNA samples. Firstly, a genomic DNA is chem. reacted with a reagent, such as bisulfite, whereby 5-methylcytosine and cytosine react differently. Afterwards, the pretreated DNA is amplified while using a polymerase and at least one primer. In the next step, the amplified genomic DNA is hybridized to two different oligonucleotide probes. The probes hybridizes adjacent to the cytosine with the unknown methylation status. One probe is lengthened by at least one nucleotide, the lengthening being subject to the methylation status of the resp. cytosine in the genomic DNA sample. The lengthened first probe is then ligated to the second probe and the ligation product is detected.

IT **146368-16-3D, conjugates** with dCTP

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
 (Cy3; ligase/polymerase method for detecting cytosine methylation in DNA samples)

RN 146368-16-3 HCAPLUS

CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



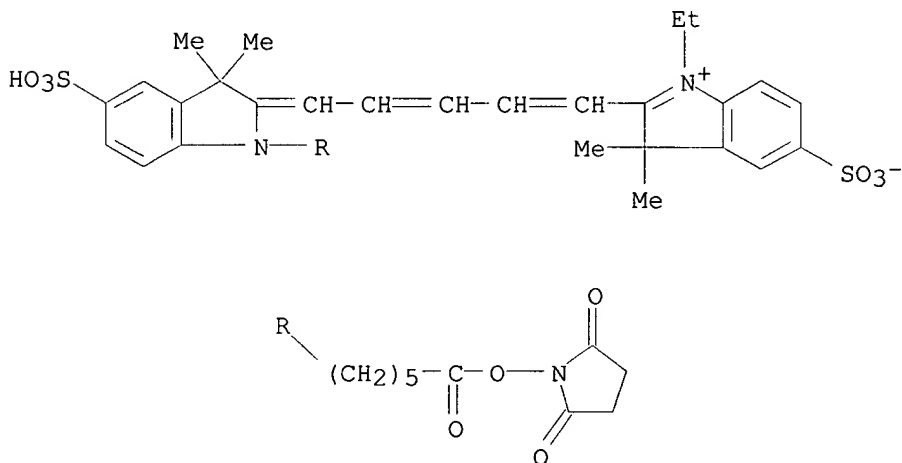
IT 146368-14-1D, conjugates with dCTP

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)

(Cy5; ligase/polymerase method for detecting cytosine methylation in DNA samples)

RN 146368-14-1 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L68 ANSWER 6 OF 18 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2001:635827 HCAPLUS
 DOCUMENT NUMBER: 135:206416
 TITLE: Method for detecting cytosine methylation in DNA samples
 INVENTOR(S): Olek, Alexander; Berlin, Kurt
 PATENT ASSIGNEE(S): Epigenomics A.-G., Germany
 SOURCE: PCT Int. Appl., 28 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

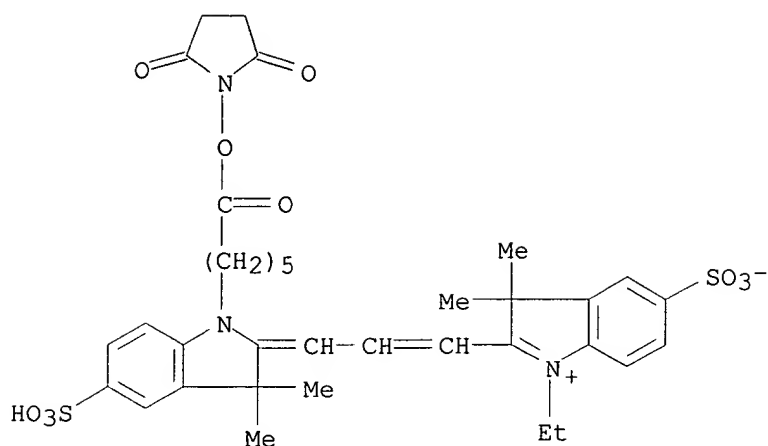
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001062064	A2	20010830	WO 2001-DE750	20010223
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 10010280	A1	20010906	DE 2000-10010280	20000225
AU 2001042280	A5	20010903	AU 2001-42280	20010223
PRIORITY APPLN. INFO.: DE 2000-10010280 A 20000225 WO 2001-DE750 W 20010223				

AB The invention relates to a method for detecting 5-methylcytosine in genomic DNA samples. Firstly, a genomic DNA is chem. reacted with a reagent, such as bisulfite, whereby 5-methylcytosine and cytosine react differently. Afterwards, the pretreated DNA is amplified while using a polymerase and at least one primer. In the next step, the amplified genomic DNA is hybridized to at least one oligonucleotide probe. The probe hybridizes adjacent to the cytosine with the unknown methylation status. The probe is lengthened by at least one nucleotide, whereby the nucleotide carries a detectable tag, and the lengthening is subject to the methylation status of the resp. cytosine in the genomic DNA sample. Thus, labeled ddCTP and (differently) labeled ddTTP may be added to the probe using DNA polymerase. In the following step, the lengthened oligonucleotides are examd. for the presence of the tag.

IT **146368-16-3D, conjugates** with dCTP
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
 (Cy3; method for detecting cytosine methylation in DNA samples)

RN 146368-16-3 HCAPLUS

CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

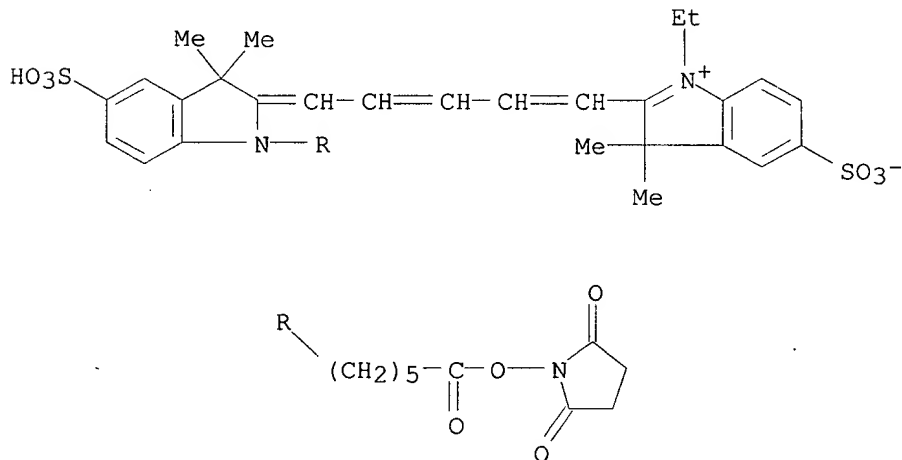


IT 146368-14-1D, conjugates with dCTP

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(Cy5; method for detecting cytosine methylation in DNA samples)

RN 146368-14-1 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



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L68 ANSWER 7 OF 18 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:397101 HCAPLUS

DOCUMENT NUMBER: 135:15070

TITLE: Continuous time-resolved resonance energy-transfer assay for polynucleic acid polymerases

INVENTOR(S): Furfine, Eric Steven; Porter, David John Timothy; Roberts, Grace Brashear

PATENT ASSIGNEE(S): Glaxo Group Limited, UK

SOURCE: PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001038587	A2	20010531	WO 2000-US32536	20001129
WO 2001038587	A3	20020510		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, EG, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-167940P P 19991129

AB A method of detecting polynucleic acid polymerase activity, including DNA and RNA polymerase activity. The method includes providing a polynucleic acid primer-template complex labeled with a energy-emitting chem. species and a nucleotide labeled with a energy-emitting chem. species; mixing the polynucleic acid primer-template complex and the nucleotide with a sample comprising or suspected to comprise a polynucleic acid polymerase; prior to, contemporaneously with or after the mixing, exposing the labeled polynucleic acid primer-template complex and the labeled nucleotide to radiation of excitation wavelength for one of the energy-emitting chem. species to thereby excite that energy-emitting chem. species; and detecting a signal produced by energy transfer between the excited energy-emitting chem. species and the other energy-emitting chem. species as a result of incorporation of the nucleotide into the polynucleic acid primer-template complex via the activity of the polynucleic acid polymerase, the detection of the signal indicating polynucleic acid polymerase activity in the sample. Candidate compds. can also be identified as modulators of polynucleic acid polymerase activity via the method. Thus, the use of Eu-labeled primer-template complex and Cy5-labeled UTP for detn. of steady-state IC50 values for nevirapine, delavirdine, and efavirenz with HIV-1 reverse transcriptase was demonstrated.

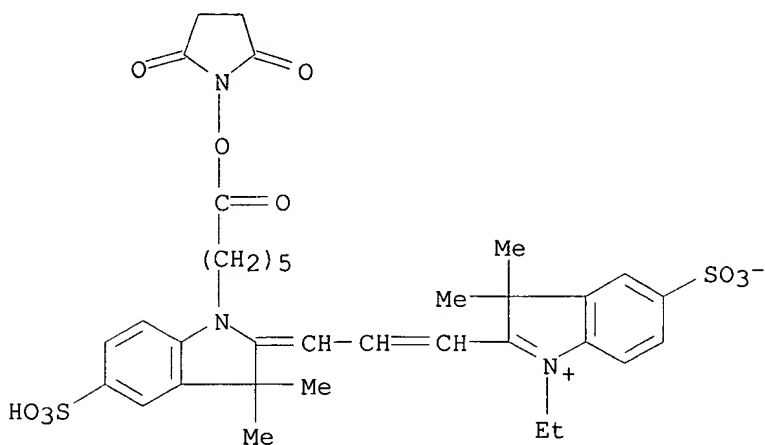
IT 146368-16-3D, conjugates with nucleotides/oligonucleotides

RL: ARG (Analytical reagent use); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process); USES (Uses)

(Cy3; continuous time-resolved resonance energy-transfer assay for polynucleic acid polymerases)

RN 146368-16-3 HCAPLUS

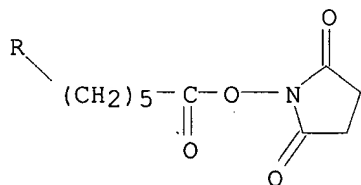
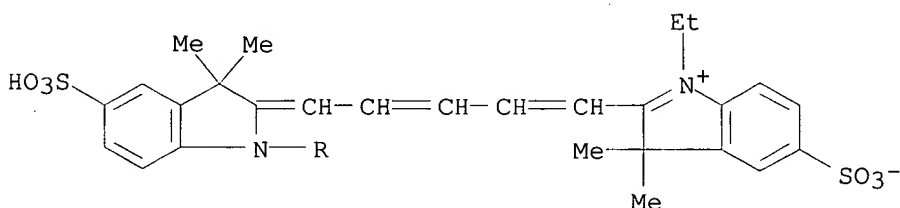
CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



IT 146368-14-1D, **conjugates** with nucleotides/oligonucleotides
 RL: ARG (Analytical reagent use); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process); USES (Uses)
 (Cy5; continuous time-resolved resonance energy-transfer assay for polynucleic acid polymerases)

RN 146368-14-1 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

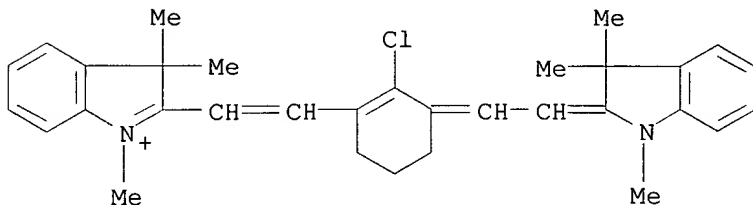


IT 102185-03-5D, Cy2, **conjugates** with nucleotides/oligonucleotides
 RL: ARG (Analytical reagent use); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process); USES (Uses)
 (continuous time-resolved resonance energy-transfer assay for polynucleic acid polymerases)

RN 102185-03-5 HCAPLUS
 CN 3H-Indolium, 2-[2-[2-chloro-3-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)ethylidene]-1-cyclohexen-1-yl]ethenyl]-1,3,3-trimethyl-, perchlorate (9CI) (CA INDEX NAME)

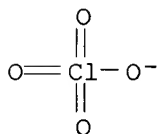
CM 1

CRN 69415-17-4
 CMF C32 H36 Cl N2



CM 2

CRN 14797-73-0
 CMF Cl O4



=> d ibib abs hitstr 168 8

L68 ANSWER 8 OF 18 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:182049 HCAPLUS

DOCUMENT NUMBER: 135:299174

TITLE: Fluorescent high-density labeling of DNA: error-free substitution for a normal nucleotide

AUTHOR(S): Foldes-Papp, Z.; Angerer, B.; Ankenbauer, W.; Rigler, R.

CORPORATE SOURCE: MBB, Department of Medical Biophysics, Karolinska Institute, Stockholm, S-17177, Swed.

SOURCE: Journal of Biotechnology (2001), 86(3), 237-253

CODEN: JBITD4; ISSN: 0168-1656

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

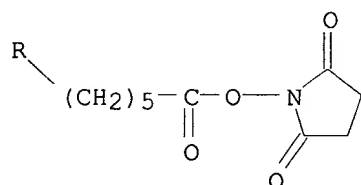
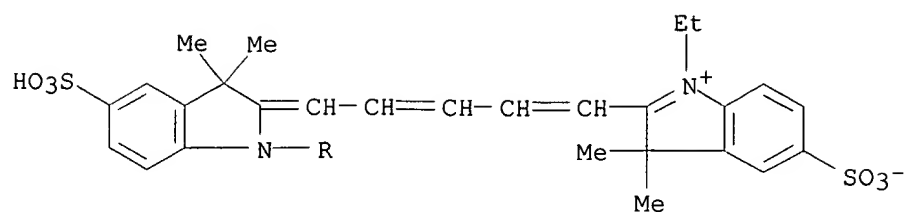
AB The enzymic incorporation of deoxyribonucleoside **triphosphates** by a thermostable, 3' 5' exonuclease deficient mutant of the Tgo DNA polymerase was studied for PCR-based high-d. labeling of 217-bp 'natural' DNA in which **fluorescent**-dUTP was substituted completely for the normal dTTP. The amplified DNA carried two different sorts of tethered dye mols. The rhodamine-green was used for internal tagging of the DNA. Since high-d. incorporation of rhodamine-green-X-dUTP led to a substantial redn. (quenching) of the rhodamine-green fluorescence, a second 'high' quantum yield label, Cy5, was inserted via a 5'-tagged primer in order to identify the two-color product. A theor. concept of fluorescence auto- and cross-correlation spectroscopy developed here was applied to quantify the DNA sequence formed in terms of both the no. of two-color fluorescent mols. and the no. of covalently incorporated rhodamine-green-X-dUMP residues. The novel approach allowed to sep. optically the specific DNA product. After complete, exonucleolytic degrdn. of the two-color DNA we detd. 82-88 fluorescent U* labels incorporated covalently out of 92 max. possible U* incorporations. The heavily green-labeled DNA was then isolated by preparative mobility-shift electrophoresis, re-amplified in a subsequent PCR with normal deoxyribonucleoside **triphosphates**, and re-sequenced. By means of this novel methodol. for analyzing base-specific incorporations that was first developed here, we found that all **fluorescent nucleotides** and the normal nucleotides were incorporated at the correct positions. The detd. labeling efficiency of 0.89-0.96 indicated that a fraction of the substrate analog was not bearing the fluorophore. The results were used to guide developments in single-mol. DNA sequencing. The labeling strategy (principal approach) for PCR-based high-d. tagging of DNA, which included an appropriate thermostable DNA polymerase and a suitable fluorescent dye-dNTP, was developed here.

IT 146368-14-1

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(Cy5; fluorescent high-d. labeling of DNA)

RN 146368-14-1 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



REFERENCE COUNT:

41

THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 168 9

L68 ANSWER 9 OF 18 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:85462 HCAPLUS

DOCUMENT NUMBER: 134:142724

TITLE: Real-time monitoring of de novo **nucleic** acid synthesis using **fluorescence** resonance energy transfer

INVENTOR(S): Okamura, Koji; Sase, Ichiro; Kan, Takayuki; Furusawa, Iwao; Sanze, Kazuyuki; Watanabe, Yuichiro; Kawakami, Shigeki

PATENT ASSIGNEE(S): Bunshi Bio Photonics Kenkyusho K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

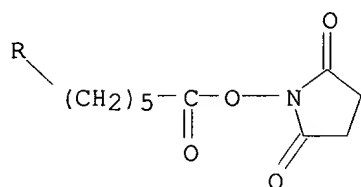
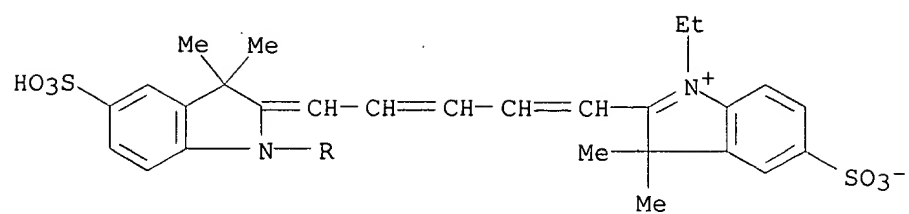
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----		-----	-----	-----
	JP 2001029072	A2	20010206	JP 1999-203576	19990716
AB	A novel method for real-time monitoring of nucleic acid synthesis in vitro transcription reactions using fluorescence resonance energy transfer (FRET) is presented. Nucleotide monomers labeled with FRET donor fluorophore and acceptor fluorophore are used in in vivo or in vitro transcription reaction. FRET derived fluorescence is detected for detection of de novo nucleic acid synthesis. RNA synthesis in an in vitro transcription reaction was detected using T7 RNA polymerase, Fluorescein-12-UTP or Bodipy FL-14-UTP as donor, and either Bodipy TMR-14-UTP, Bodipy TR-14-UTP, or Texas Red-5-UTP as acceptor. DNA synthesis was detected using reverse transcriptase, Fluorescein-11-dUTP as donor, and Cy5-dUTP as acceptor.				
IT	146368-14-1D , Cy5, conjugates with dUTP RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses) (Cy5; real-time monitoring of de novo nucleic acid synthesis using fluorescence resonance energy transfer)				
RN	146368-14-1 HCAPLUS				
CN	3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)				



=> d ibib abs hitstr 168 10

L68 ANSWER 10 OF 18 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:825711 HCAPLUS

DOCUMENT NUMBER: 134:159683

TITLE: Identification of single **fluorescently** labelled **mononucleotide** molecules in solution by spectrally resolved time-correlated single-photon counting

AUTHOR(S): Herten, D. P.; Tinnefeld, P.; Sauer, M.

CORPORATE SOURCE: Physikalisch-Chemisches Institut, Universitat Heidelberg, Heidelberg, 69120, Germany

SOURCE: Applied Physics B: Lasers and Optics (2000), 71(5), 765-771

CODEN: APBOEM; ISSN: 0946-2171

PUBLISHER: Springer-Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We describe a method to identify single dye-labeled mononucleotide mols. in soln. with high classification probability based on confocal microscopy in combination with spectrally and time-resolved fluorescence detection with two detectors. For efficient excitation of the labeled mononucleotide mols. JA133-dUTP, JA169-dUTP, Cy5-dCTP, and JA242-dUTP a short-pulse diode laser emitting at 634 nm with a repetition rate of 64 MHz was applied. The time-resolved fluorescence signals of individual mols. were analyzed and identified by a max. likelihood estimator (MLE). Scatter plots of spectrally and time-resolved fluorescence data demonstrated the existence of four distinct populations with sym. shape. The distributions of each of the mononucleotide **conjugates** were detd. by fitting a superposition of two independent Gaussians. Taking only those single-mol. bursts which contain more than 50 photon counts, three labeled mononucleotide mols. were identified in soln. by spectrally and time-resolved fluorescence spectroscopy with a probability of correct classification of .apprxeq. 99%.

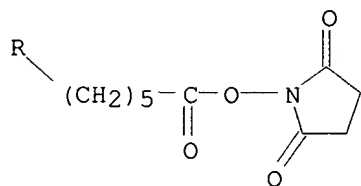
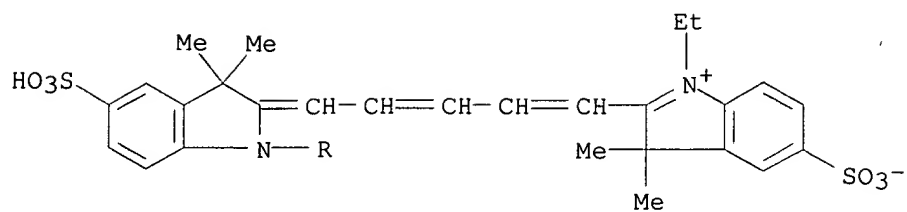
IT 146368-14-1, Cy5

RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)

(identification of single **fluorescently** labeled **mononucleotide** mols. in soln. by spectrally resolved time-correlated single-photon counting)

RN 146368-14-1 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



REFERENCE COUNT:

23

THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 168 11

L68 ANSWER 11 OF 18 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:707239 HCAPLUS

DOCUMENT NUMBER: 133:283009

TITLE: Fluorescent squaraine dyes for biological applications and their preparation

INVENTOR(S): West, Richard Martin; Cummins, William Jonathan; Nairne, Robert James Domett; Bull, Matthew Graham

PATENT ASSIGNEE(S): Amersham Pharmacia Biotech UK Limited, UK

SOURCE: PCT Int. Appl., 81 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

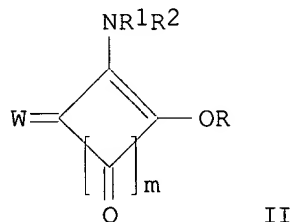
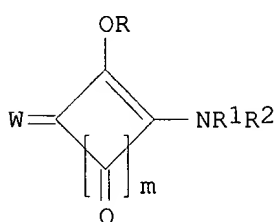
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000058405	A2	20001005	WO 2000-GB1223	20000330
WO 2000058405	A3	20010201		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2000035680	A5	20001016	AU 2000-35680	20000330
EP 1165693	A2	20020102	EP 2000-914284	20000330
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: EP 1999-302510 A 19990331
WO 2000-GB1223 W 20000330

OTHER SOURCE(S): MARPAT 133:283009

GI



AB The dyes, with improved photostability, have the structure I or II [R = neg. charge, LG; G = reactive group for bonding to biomols., spectrum- or soly.-modifying group; L = linking group; R1 = H, C1-20 hydrocarbyl, LG; R2 = H, C1-20 hydrocarbyl, OR5, NR6R7, COR7, NR6COR7, N:R8, CO2R7, LG, or NR1R2 = heterocyclyl; R5-R8 = H, C1-20 hydrocarbyl, LG; W = ring system contg. quaternary N **conjugated** with the cyclobutene ring (via a linking group); m = 1-3] or are (homo- or hetero-) dimers or oligomers thereof. Thus, di-Me squarate was condensed with 1,3,3-trimethyl-2-

methyleneindoline and the resulting methoxycyclobutene compd. was hydrolyzed to the hydroxy analog, which was treated with piperidine to give a I (R = neg. charge, NR1R2 = piperidino, m = 1), absorption .lambda.max 470 nm, fluorescence .lambda.max 495 nm.

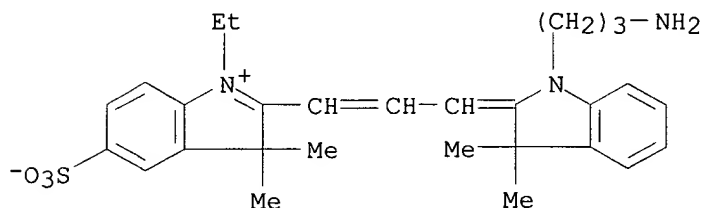
IT 299207-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of fluorescent squaraine dyes for biol. applications)

RN 299207-42-4 HCAPLUS

CN 3H-Indolium, 2-[3-[1-(3-aminopropyl)-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



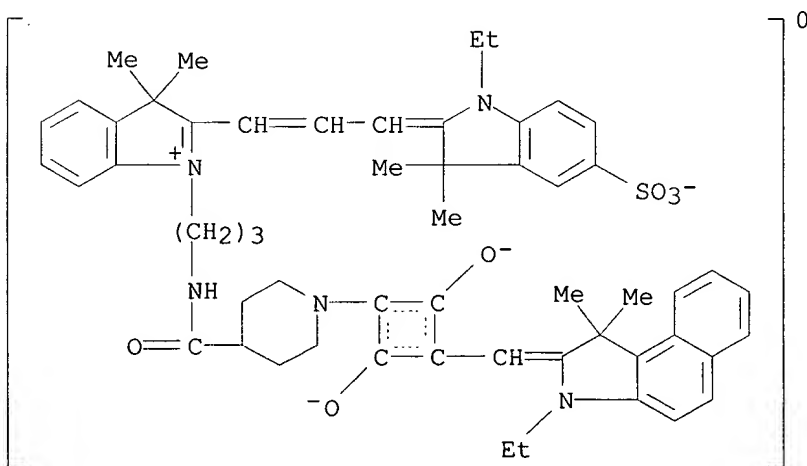
IT 299425-00-6P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(prepn. of fluorescent squaraine dyes for biol. applications)

RN 299425-00-6 HCAPLUS

CN Cyclobutenediylum, 1-[(3-ethyl-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene)methyl]-3-[4-[[[3-[2-[3-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1-propenyl]-3,3-dimethyl-3H-indolio]propyl]amino]carbonyl]-1-piperidiny]-2,4-dihydroxy-, tris(inner salt) (9CI) (CA INDEX NAME)



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L68 ANSWER 12 OF 18 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:441969 HCAPLUS

DOCUMENT NUMBER: 133:86486

TITLE: High throughput assay system using Multi Array Plate Screen, nuclease protection, oligonucleotide anchors, bifunctional linkers, and mass spectrometry

INVENTOR(S): Kris, Richard M.; Felder, Stephen

PATENT ASSIGNEE(S): USA

SOURCE: PCT Int. Appl., 111 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000037684	A1	20000629	WO 1999-US30515	19991222
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: US 1998-218166 A1 19981222

AB The present invention relates to compns., app. and methods useful for concurrently performing multiple, high throughput, biol. or chem. assays, using repeated arrays of probes, called Multi Array Plate Screen (MAPS). A combination of the invention comprises a surface, which comprises a plurality of test regions, at least two of which, and in a preferred embodiment, at least twenty of which, are substantially identical, wherein each of the test regions comprises an array of generic anchor mols. The anchors are assocd. with bifunctional linker mols., each contg. a portion which is specific for at least one of the anchors and a portion which is a probe specific for a target of interest. The resulting array of probes is used to analyze the presence or test the activity of one or more target mols. which specifically interact with the probes. In one embodiment of the invention, the test regions (which can be wells) are further subdivided into smaller subregions (indentations, or dimples). In one embodiment of the invention, ESTs are mapped. In another embodiment, the presence of a target nucleic acid is detected by protecting the target against nuclease digestion with a polynucleotide fragment, and analyzing the protected polynucleotide by mass spectrometry.

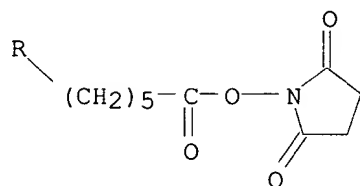
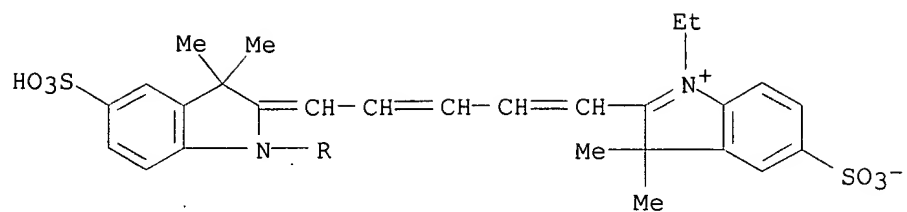
IT 146368-14-1, Cy5

RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Cy5, fluorescent probe; high throughput assay system using Multi Array Plate Screen, nuclease protection, oligonucleotide anchors, bifunctional linkers, and mass spectrometry)

RN 146368-14-1 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



REFERENCE COUNT:

11

THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 168 13

L68 ANSWER 13 OF 18 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:260581 HCAPLUS

DOCUMENT NUMBER: 132:289573

TITLE: Fluorescent probes for chromosomal painting

INVENTOR(S): Cherif, Dorra

PATENT ASSIGNEE(S): Genset, Fr.

SOURCE: PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000022164	A1	20000420	WO 1999-FR2517	19991015
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
FR 2784683	A1	20000421	FR 1998-12957	19981015
AU 9960981	A1	20000501	AU 1999-60981	19991015
EP 1121461	A1	20010808	EP 1999-947589	19991015
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			

PRIORITY APPLN. INFO.:

FR 1998-12957 A 19981015

WO 1999-FR2517 W 19991015

AB The invention concerns fluorescent probes used in multicolor in situ fluorescent hybridization methods, and principally chromosomal painting. The probes designed for marking a chromosome are such that they consist of a set of DNA segments more represented in certain chromosomal bands and are obtained by Interspersed Repeated Sequence-PCR amplification from said chromosomes using PCR primers specific for the repeated and dispersed DNA sequences Alu and LINE. The invention further concerns methods for producing said probes, multicolor FISH methods capable of using said probes, and diagnostic kits comprising them. The invention also concerns combinations of fluorophores and optical filters.

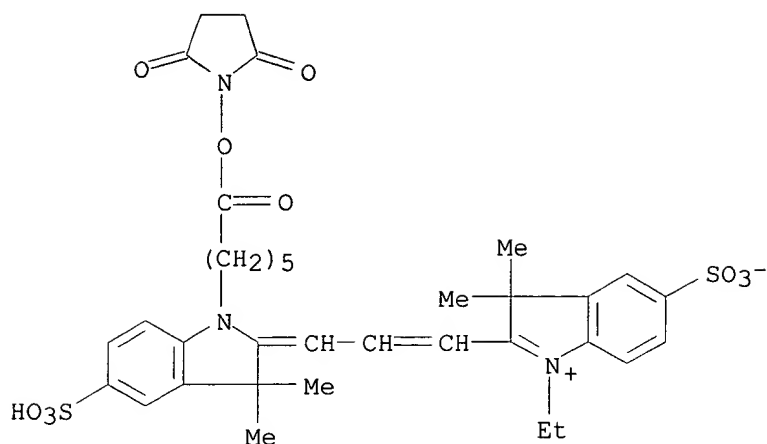
IT 146368-16-3DP, Cy3, conjugates with probes

RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)

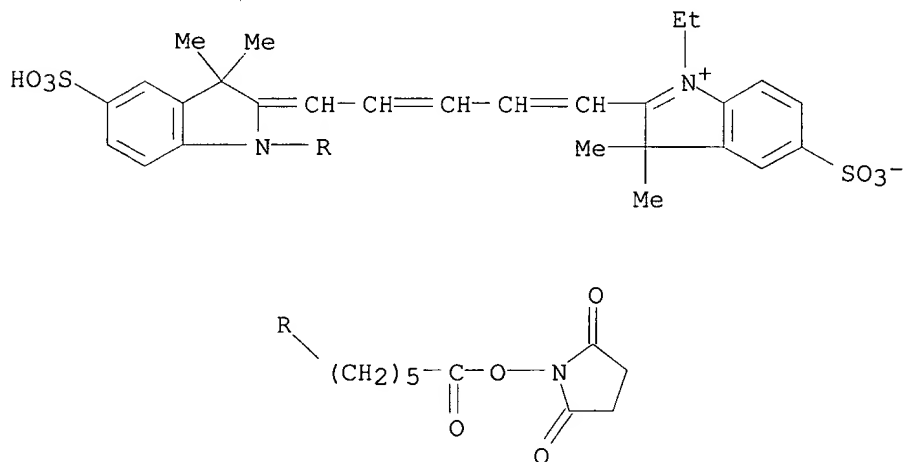
(Cy3; fluorescent probes for chromosomal painting)

RN 146368-16-3 HCAPLUS

CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



IT 146368-14-1DP, Cy5, **conjugates** with probes
 RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (Cy5; fluorescent probes for chromosomal painting)
 RN 146368-14-1 HCAPLUS
 CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 168 14

L68 ANSWER 14 OF 18 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2000:219085 HCAPLUS
 DOCUMENT NUMBER: 132:247133
 TITLE: Optimally **fluorescent oligonucleotides**
 INVENTOR(S): Nilsen, Thor W.
 PATENT ASSIGNEE(S): Poly Probe, Inc., USA
 SOURCE: U.S., 14 pp., Cont.-in-part of U.S. Ser. No. 657,961.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6046038	A	20000404	US 1997-909539	19970812
US 6072043	A	20000606	US 1996-657961	19960604
US 2002012972	A1	20020131	US 2001-911039	20010723

PRIORITY APPLN. INFO.:
 US 1996-657961 A2 19960604
 US 1997-909539 A1 19970812
 US 2000-482803 B1 20000113

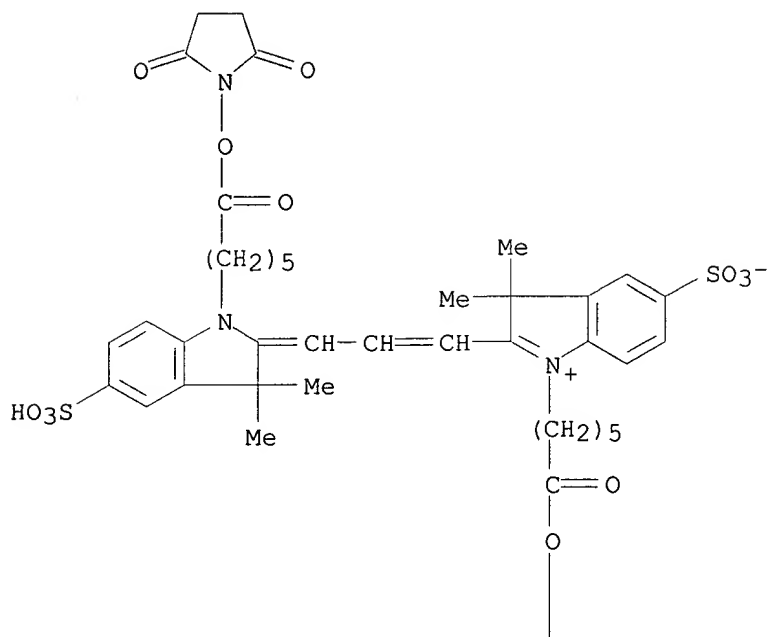
AB A method is disclosed for the prepn. of optimally **fluorescent oligonucleotides** wherein **fluorescent dye-conjugated nucleotide triphosphates** are incorporated into a nucleic acid sequence in a defined repetitive manner which allows for the optimal specific **fluorescence** of the **oligonucleotide**. The oligonucleotides of the present invention are useful in the assay of a wide variety of nucleic acid sequences, specifically wherever highly **fluorescent nucleic acid** probes are desired. The prepn. and purifn. of optimally **fluorescent oligonucleotides** comprise the steps of (a) prepg. a DNA primer; (b) prepg. a template oligonucleotide contg. a nucleotide sequence complementary to the primer, and a nucleotide repeat region downstream from the complementary region; (c) annealing the template and primer in a suitable reaction medium contg. a DNA polymerase, **nucleotide triphosphates** and **fluorescent dye-conjugated nucleotide triphosphates**; (d) synthesis of complementary strand of the template; (e) attaching the oligonucleotide contg. a target sequence adjacent to the complementary strand; and (f) purifying the optimally **fluorescent oligonucleotide**. For fluorescence optimization of the incorporation of dCTP-Cy3, the optimal enzyme is SEQUENASE.RTM. and the optimal spacing is every third mol.

IT **146397-20-8D, Cy3, conjugate** with dCTP
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (prepn. and applications of optimally **fluorescent oligonucleotides**)

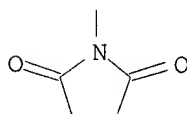
RN 146397-20-8 HCAPLUS

CN 3H-Indolium, 1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 168 15

L68 ANSWER 15 OF 18 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:203017 HCAPLUS

DOCUMENT NUMBER: 132:233995

TITLE: Method of sequencing nucleic acids by applying a computer alignment algorithm to electrophoretic separation patterns of dideoxy-terminated fragment mixtures

INVENTOR(S): McCormick, Randy M.; Briggs, Jonathan

PATENT ASSIGNEE(S): Aclara Biosciences, USA

SOURCE: U.S., 29 pp., Cont.-in-part of U.S. 636,414, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

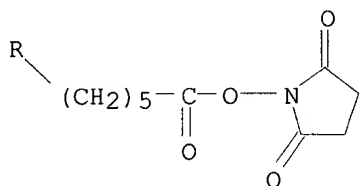
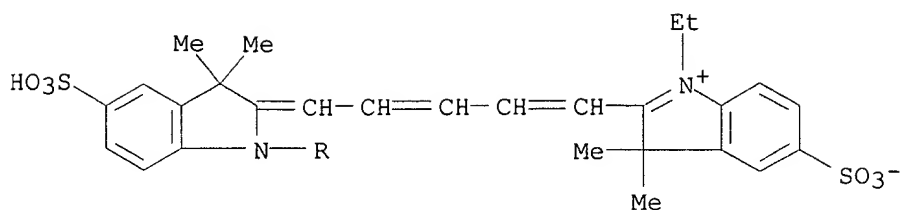
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6043036	A	20000328	US 1997-977931	19971124
PRIORITY APPLN. INFO.:			US 1996-636414	19960423

AB The present invention describes a method of sequencing nucleic acids in which mixts. of oligonucleotide fragments are derived from sequencing reactions using combinations of the 2',3'-dideoxynucleoside 5'-**triphosphate** or 3' deoxynucleoside 5'-**triphosphate** terminators and appropriate concns. of four dNTPs (2'-deoxynucleoside 5' **triphosphates**, e.g., dATP, dCTP, dGTP, dTTP, dITP, 7-deaza-GTP). These fragments are generated by enzymic extension of a primer hybridized to the single-stranded template DNA to be sequenced. In contrast to common slab gel sequencing methods, the method of the instant invention does not require precise alignment of the four sepn. sets of the terminated fragments to permit deduction of the DNA sequence. Instead the relative positions of the nucleotide bases in sep. mixts. can be deduced from binary-coded sequence string sets corresponding to the presence or absence of particular fragments by applying a computer alignment algorithm. In addn., the method possesses inherent redundancy in the sepns., which facilitates sequence assignment by resolving sequence uncertainties or anomalies. The method was applied to the detn. of the known sequence of M13mp18 DNA, and a lengthy stretch of sequence in the middle was correctly detd.

IT **146368-14-1D**, FluoroLink Mono Reactive Dye Cy5, **conjugate** with sequencing primers **146368-16-3D**, FluoroLink Mono Reactive Dye Cy3, **conjugate** with sequencing primers
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (method of sequencing nucleic acids by applying a computer alignment algorithm to electrophoretic sepn. patterns of dideoxy-terminated fragment mixts.)

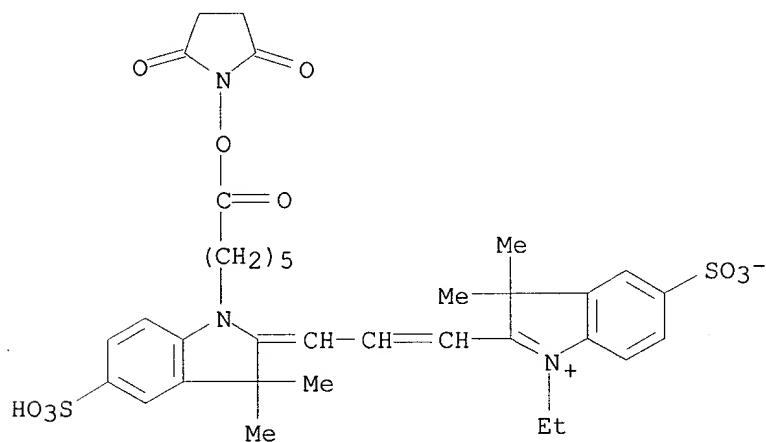
RN 146368-14-1 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



RN 146368-16-3 HCAPLUS

CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



REFERENCE COUNT:

6

THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 168 16

L68 ANSWER 16 OF 18 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1996:637657 HCAPLUS
 DOCUMENT NUMBER: 125:321156
 TITLE: Hybridization of polynucleotides **conjugated**
 with chromophores and fluorophores to generate
 donor-to donor energy transfer system
 INVENTOR(S): Heller, Michael J.
 PATENT ASSIGNEE(S): Nanogen, Inc., USA
 SOURCE: U.S., 24 pp., Cont.-in-part of U.S. Ser. No. 790, 262,
 abandoned.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 37
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5565322	A	19961015	US 1994-232233	19940505
WO 9309128	A1	19930513	WO 1992-US9827	19921106
W: AU, CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE				
EP 1067134	A2	20010110	EP 2000-121275	19921106
EP 1067134	A3	20010502		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, IE				
US 5849489	A	19981215	US 1996-703601	19960823
US 6048690	A	20000411	US 1997-855058	19970514
US 5835404	A	19981110	US 1997-906569	19970805
US 6067246	A	20000523	US 1998-129740	19980805
US 6385080	B1	20020507	US 2000-568527	20000509
US 6416953	B1	20020709	US 2000-724753	20001128
PRIORITY APPLN. INFO.:			US 1991-790262	B2 19911107
			WO 1992-US9827	W 19921106
			EP 1992-925225	A3 19921106
			US 1993-146504	A2 19931101
			US 1994-232233	A1 19940505
			US 1994-250951	A2 19940527
			US 1994-258168	A2 19940610
			US 1994-271882	A2 19940707
			US 1994-304657	A2 19940909
			US 1995-534454	A2 19950927
			US 1996-703601	A2 19960823
			US 1997-906569	A1 19970805
			US 1998-123638	A1 19980728
			US 1998-129740	A1 19980805
AB	The presence invention contemplates chromophore-contg. polynucleotides having at least two donor chromophores operatively linked to the polynucleotide by linker arms, such that the chromophores are positioned by linkage along the length of the polynucleotide at a donor-donor transfer distance, and at least one fluorescing acceptor chromophore operatively linked to the polynucleotide by a linker arm, such that the fluorescing acceptor chromophore is positioned by linkage at a donor-acceptor transfer distance from at least one of the donor chromophores, to form a photonic structure for collecting photonic energy and transferring the energy to an acceptor chromophore. A 14 nm photonic antenna structure was assembled from 4 oligonucleotides: a 16-mer acceptor unit 5.4 nm long labeled with sulforhodamine 101, a 30-mer intermediate			

donor unit 10.2 nm long labeled with 2 **fluoresceins** sepd. by 6 **nucleotides** (or 2.4 nm), a 29-mer intermediate donor unit 9.9 nm long labeled with 2 **fluoresceins** sepd. by 6 **nucleotides**, and a terminal donor 15-mer 5.1 nm long labeled with a single fluorescein. When illuminated with 495 nm light, energy transfer to the acceptor unit was about 76% efficient. 30% Of the transferred energy was found to come from the intermediate oligonucleotide which has its first donor group located 6.8 nm from the acceptor group, i.e. a distance well beyond the Foerster distance. This energy transfer is abolished when the structure is destroyed by heating to 90.degree..

IT 54849-69-3, IR144

RL: NUU (Other use, unclassified); USES (Uses)
(acceptor chromophore, **conjugate** with oligonucleotide;
hybridization of polynucleotides **conjugated** with chromophores
and fluorophores to generate donor-to donor energy transfer system)

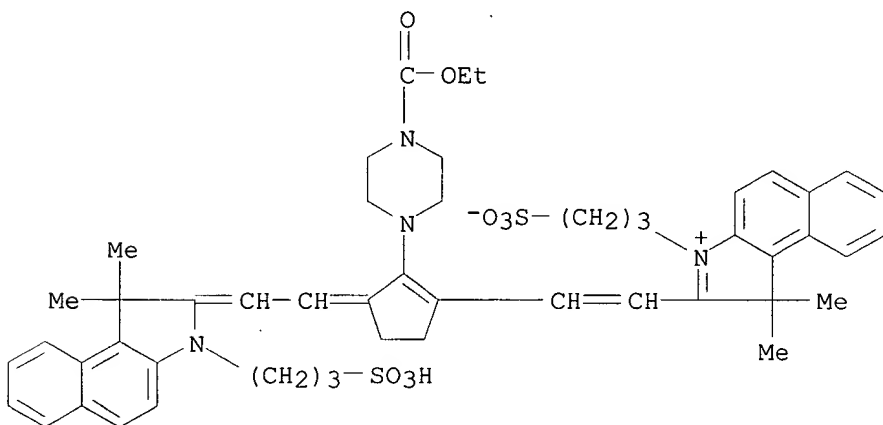
RN 54849-69-3 HCAPLUS

CN 1H-Benz[e]indolium, 2-[2-[3-[[1,3-dihydro-1,1-dimethyl-3-(3-sulfopropyl)-2H-benz[e]indol-2-ylidene]ethylidene]-2-[4-(ethoxycarbonyl)-1-piperazinyl]-1-cyclopenten-1-yl]ethenyl]-1,1-dimethyl-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 55660-40-7

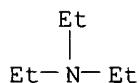
CMF C50 H58 N4 O8 S2



CM 2

CRN 121-44-8

CMF C6 H15 N



=> d ibib abs hitstr 168 17

L68 ANSWER 17 OF 18 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1995:3281 HCAPLUS

DOCUMENT NUMBER: 122:155746

TITLE: Fluorescent dyes for labeling biosubstances for analysis

INVENTOR(S): Katayose, Mitsuo; Tai, Seiji; Watanabe, Hiroo

PATENT ASSIGNEE(S): Hitachi Chemical Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05287209	A2	19931102	JP 1992-88743	19920409

OTHER SOURCE(S): MARPAT 122:155746

GI For diagram(s), see printed CA Issue.

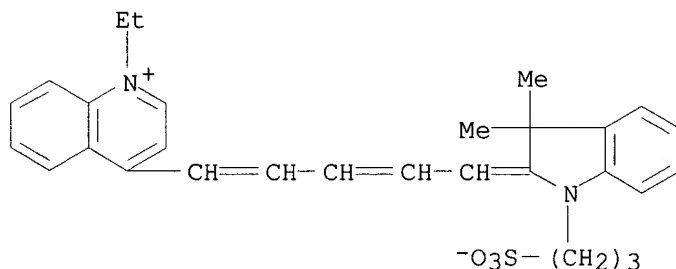
AB The fluorescent dyes I (A1, A2 = benzene, naphthalene, etc.; R1-3 = H, alkyl, alkoxy; X1 = S, O, etc.; X2 = S, O, CO, etc.; and L = polymethylene) and biosubstance (e.g. vitamin, nucleotide, or protein) labeled with the fluorescent dye are prepd. and used for antigen, pharmaceutical, or DNA anal. Four such fluorescent dyes, their **sulfonylchloride** derivs. and p-aminobenzoic acid adducts, and 3-(4-aminobutyl)morphine labeled with these dyes were prepd. for morphine anal. A labeled DNA probe, i.e. GTTTCCTCCAGTCACGAC, was also prepd. for DNA sequence anal. The detection of the dye is not affected by heme in blood and is therefore a good test reagent for clin. anal.

IT 154187-62-9P 161159-47-3P 161159-48-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as label, for biosubstance detn.)

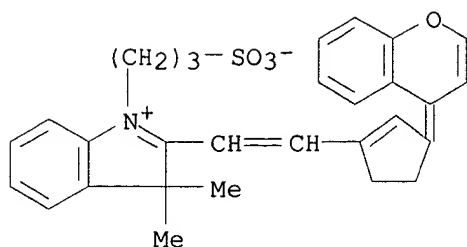
RN 154187-62-9 HCAPLUS

CN Quinolinium, 4-[5-[1,3-dihydro-3,3-dimethyl-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-, inner salt (9CI) (CA INDEX NAME)



RN 161159-47-3 HCAPLUS

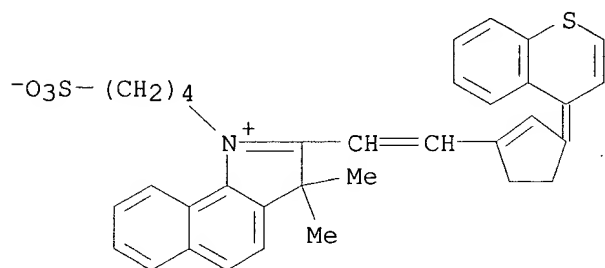
CN 3H-Indolium, 3,3-dimethyl-2-[2-[3-(ar-methyl-4H-1-benzopyran-4-ylidene)-1-cyclopenten-1-yl]ethenyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



D1-Me

RN 161159-48-4 HCAPLUS

CN 3H-Benz[g]indolium, 3,3-dimethyl-2-[2-[3-(methyl-4H-1-benzothiopyran-4-ylidene)-1-cyclopenten-1-yl]ethenyl]sulfo-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

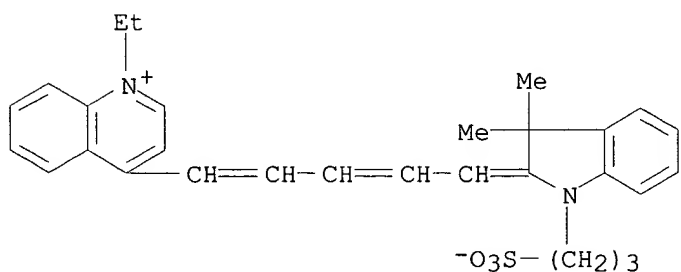

D1-SO₃H

D1-Me

IT 154187-62-9DP, oligonucleotide primer **conjugates**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, for morphine detn.)

RN 154187-62-9 HCAPLUS

CN Quinolinium, 4-[5-[1,3-dihydro-3,3-dimethyl-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-, inner salt (9CI) (CA INDEX NAME)



MAUPIN 09/829,467

=> d ibib abs hitstr 168 18

L68 ANSWER 18 OF 18 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1993:642929 HCAPLUS

DOCUMENT NUMBER: 119:242929

TITLE: Polynucleotides **conjugated** with chromophores
and fluorophores for determination of nucleic acid

INVENTOR(S): Heller, Michael J.

PATENT ASSIGNEE(S): Nanotronics, Inc., USA

SOURCE: PCT Int. Appl., 83 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 37

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9309128	A1	19930513	WO 1992-US9827	19921106
W: AU, CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE				
AU 9331364	A1	19930607	AU 1993-31364	19921106
AU 667497	B2	19960328		
EP 620822	A1	19941026	EP 1992-925225	19921106
EP 620822	B1	20010530		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, SE				
JP 07502992	T2	19950330	JP 1992-508793	19921106
EP 1067134	A2	20010110	EP 2000-121275	19921106
EP 1067134	A3	20010502		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, IE				
ES 2159282	T3	20011001	ES 1992-925225	19921106
US 5565322	A	19961015	US 1994-232233	19940505
US 6416953	B1	20020709	US 2000-724753	20001128

PRIORITY APPLN. INFO.:

US 1991-790262	A2	19911107
EP 1992-925225	A3	19921106
WO 1992-US9827	A	19921106
US 1994-232233	A1	19940505
US 1994-250951	A2	19940527
US 1998-123638	A1	19980728

AB A method for detn. of a nucleic acid of interest with a photonic energy transfer system using a polynucleotide labeled with .gtoreq.2 (non)fluorescing donor chromophores at a donor-donor transfer distance and a fluorescing acceptor chromophore at a donor-acceptor distance. Alternatively, the fluorescing acceptor chromophore is located on a different polynucleotide. The method comprises mixing of the (non)fluorescing donors and **fluorescing** acceptor-labeled **polynucleotide**, which contained a complementary sequence to the nucleic acid of interest, with a nucleic acid sample; hybridizing; exciting the donor (non)fluorescing chromophore; and detecting the presence of photonic energy transfer.

IT 54849-69-3

RL: ANST (Analytical study)

(as donor chromophore, in labeling polynucleotides for detn. of nucleic acid by photonic energy transfer)

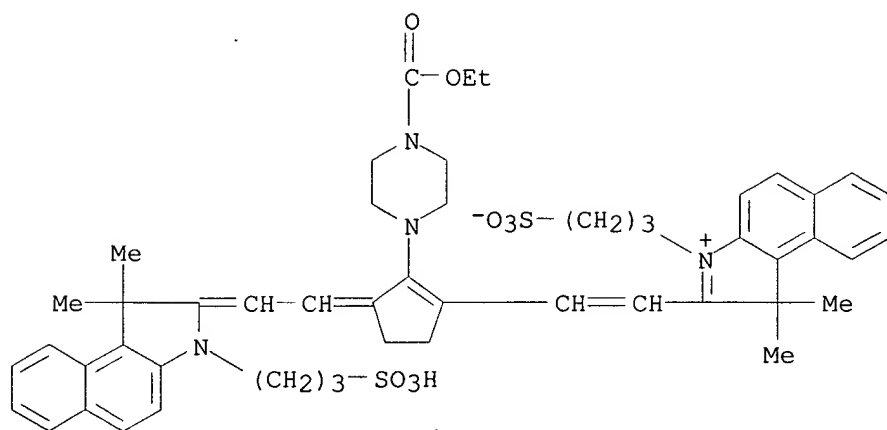
RN 54849-69-3 HCAPLUS

CN 1H-Benz[e]indolium, 2-[2-[3-[[1,3-dihydro-1,1-dimethyl-3-(3-sulfopropyl)-2H-benz[e]indol-2-ylidene]ethylidene]-2-[4-(ethoxycarbonyl)-1-piperazinyl]-1-cyclopenten-1-yl]ethenyl]-1,1-dimethyl-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 55660-40-7

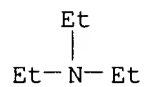
CMF C50 H58 N4 O8 S2



CM 2

CRN 121-44-8

CMF C6 H15 N

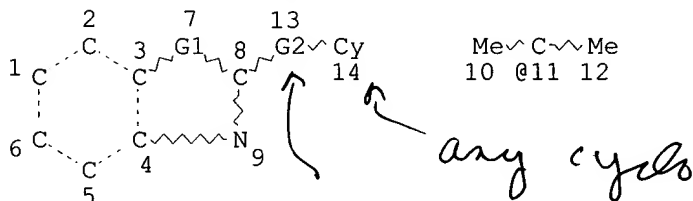


Generic Search

=> d que 169

L1 78 SEA FILE=HCAPLUS ABB=ON PLU=ON SHINOKI H?/AU
 L2 360 SEA FILE=HCAPLUS ABB=ON PLU=ON INOMATA H?/AU
 L3 2835 SEA FILE=HCAPLUS ABB=ON PLU=ON KOJIMA M?/AU
 L4 514 SEA FILE=HCAPLUS ABB=ON PLU=ON SUDO Y?/AU
 L5 112 SEA FILE=HCAPLUS ABB=ON PLU=ON SESHIMOTO O?/AU
 L6 3873 SEA FILE=HCAPLUS ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4 OR L5)
 L7 70 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 AND FLUORESCEN?
 L8 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L7 AND NUCLEOTID?
 L9 89880 SEA FILE=HCAPLUS ABB=ON PLU=ON ?CYANIN? OR ?STYRYL?
 L10 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L8 AND L9
 L11 53 SEA FILE=REGISTRY ABB=ON PLU=ON (1173-82-6/BI OR 112242-04-3/
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 85-32-5/BI OR 86-01-1/BI OR 95-50-1/BI)
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 L15 16673 SEA FILE=HCAPLUS ABB=ON PLU=ON ?STYRYL?
 L16 863910 SEA FILE=HCAPLUS ABB=ON PLU=ON (DNA OR ?NUCLEOTID? OR
 NUCLEIC)
 L18 18654 SEA FILE=HCAPLUS ABB=ON PLU=ON (SULFONATES/CT OR SULFONATION/
 CT OR "SULFONIC ACIDS"/CT)
 L19 6154 SEA FILE=HCAPLUS ABB=ON PLU=ON "PHOSPHATES, BIOLOGICAL
 STUDIES"/CT
 L34 STR

INVENTOR SEARCH



VAR G1=O/S/11
 REP G2=(2-9) C
 NODE ATTRIBUTES:
 CONNECT IS E3 RC AT 8
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L36 45490 SEA FILE=REGISTRY SSS FUL L34
 L39 4949 SEA FILE=REGISTRY ABB=ON PLU=ON L36 AND ?SULFON?/CNS
 L40 639 SEA FILE=REGISTRY ABB=ON PLU=ON L36 AND ?PHOSPH?/CNS
 L41 39918 SEA FILE=REGISTRY ABB=ON PLU=ON L36 NOT (L39 OR L40)

L42	561	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L41 AND OC4/ES
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L63	266	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L46 AND L62
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L65	21	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L64 AND L50
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L67	8	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L65 AND L66
L69	7	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L67 NOT L12

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L69 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:256388 HCAPLUS

DOCUMENT NUMBER: 136:296159

TITLE: Modified **carbocyanine** dyes and their
conjugates and their uses

INVENTOR(S): Leung, Wai-Yee; Cheung, Ching-Ying; Yue, Stephen

PATENT ASSIGNEE(S): Molecular Probes, Inc., USA

SOURCE: PCT Int. Appl., 107 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002026891	A1	20020404	WO 2001-US30404	20010928
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002077487	A1	20020620	US 2001-968401	20010929
US 2002064794	A1	20020530	US 2001-969853	20011001
PRIORITY APPLN. INFO.:			US 2000-236637P	P 20000929
			US 2001-276870P	P 20010316

OTHER SOURCE(S): MARPAT 136:296159

AB Chem. reactive **carbocyanine** dyes incorporating an indolium ring moiety that is substituted at the 3-position by a reactive group or by a **conjugated** substance are disclosed. **Conjugation** through this position results in spectral properties that are uniformly superior to those of **conjugates** of spectrally similar dyes wherein attachment is at a different position. The invention includes deriv. compds. having one or more benzo nitrogens. The fluorescent dyes have a reduced tendency to self-assoc. and may be used for staining biol. samples.

IT 407627-63-8P 407627-69-4P 407627-86-5P

407627-90-1P 407628-25-5P

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)

(dye; prodn. of indolium fluorescent **cyanine** dyes and their biol. use)

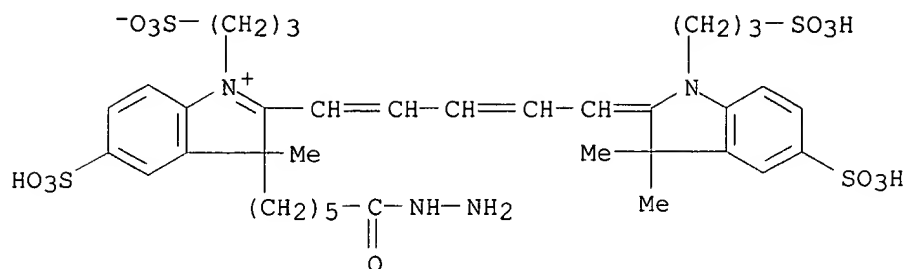
RN 407627-63-8 HCAPLUS

CN 3H-Indolium, 2-[5-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-3-(6-hydrazino-6-oxohexyl)-3-methyl-5-sulfo-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:3) (9CI) (CA INDEX NAME)

CM 1

CRN 407627-62-7

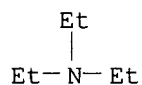
CMF C36 H48 N4 O13 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



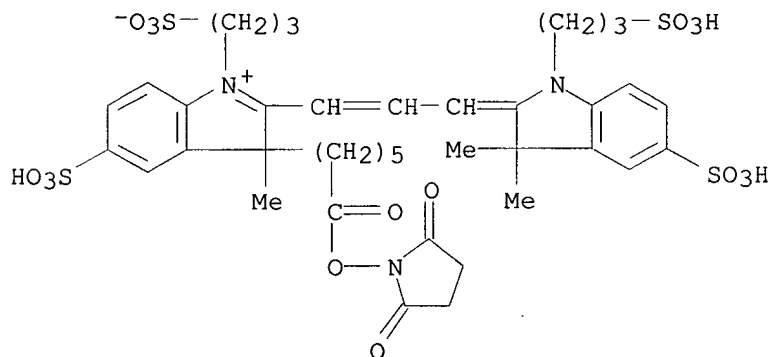
RN 407627-69-4 HCAPLUS

CN 3H-Indolium, 2-[3-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1-propenyl]-3-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-3-methyl-5-sulfo-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:3) (9CI) (CA INDEX NAME)

CM 1

CRN 407627-68-3

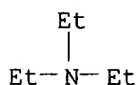
CMF C38 H47 N3 O16 S4



CM 2

CRN 121-44-8

CMF C6 H15 N

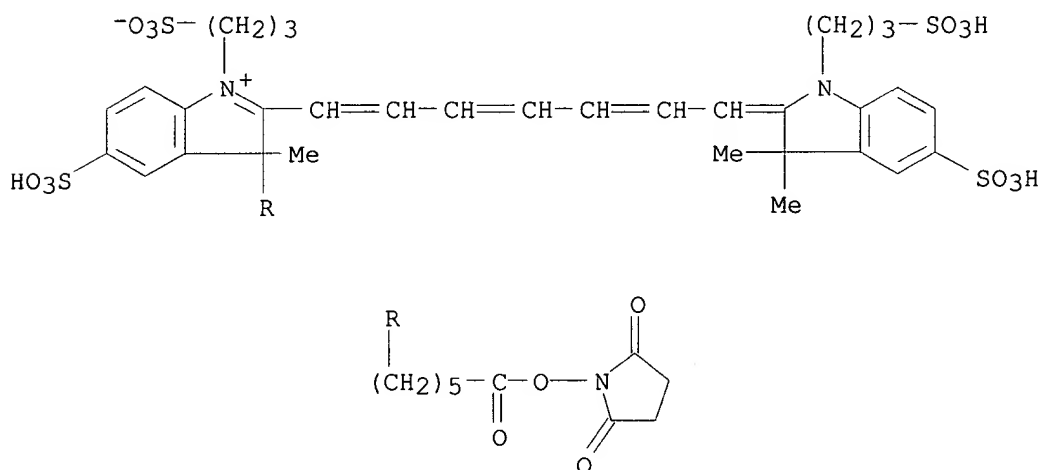


RN 407627-86-5 HCAPLUS
 CN 3H-Indolium, 2-[7-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-3-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-3-methyl-5-sulfo-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:3) (9CI) (CA INDEX NAME)

CM 1

CRN 407627-85-4

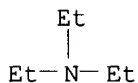
CMF C42 H51 N3 O16 S4



CM 2

CRN 121-44-8

CMF C6 H15 N

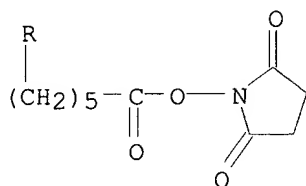
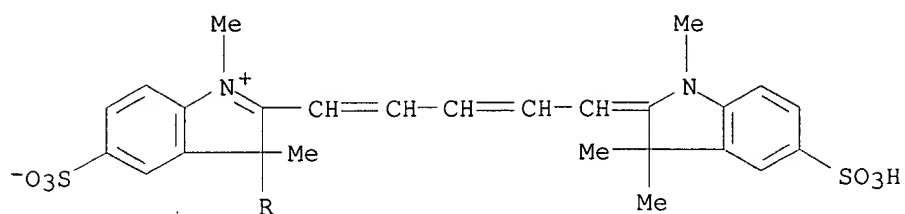


RN 407627-90-1 HCAPLUS
 CN 3H-Indolium, 2-[5-(1,3-dihydro-1,3,3-trimethyl-5-sulfo-2H-indol-2-ylidene)-1,3-pentadienyl]-3-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dimethyl-5-sulfo-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 407627-89-8

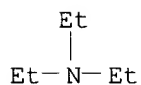
CMF C36 H41 N3 O10 S2



CM 2

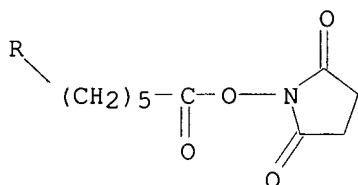
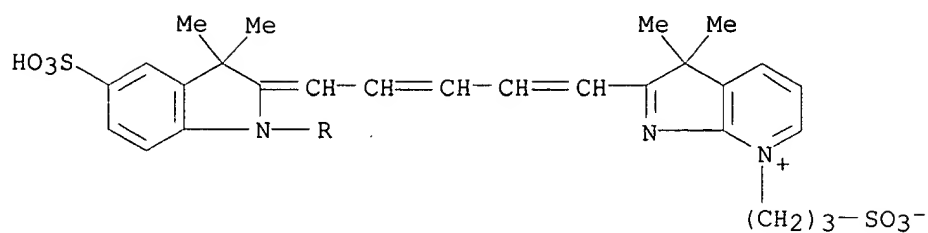
CRN 121-44-8

CMF C6 H15 N



RN 407628-25-5 HCAPLUS

CN 3H-Pyrrolo[2,3-b]pyridinium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-3,3-dimethyl-7-(3-sulfopropyl)-, inner salt, monopotassium salt (9CI) (CA INDEX NAME)



● K

IT 407627-61-6P

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); RCT (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(dye; prodn. of indolium fluorescent **cyanine** dyes and their biol. use)

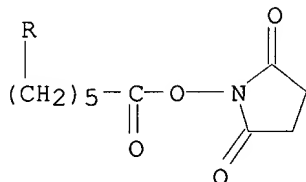
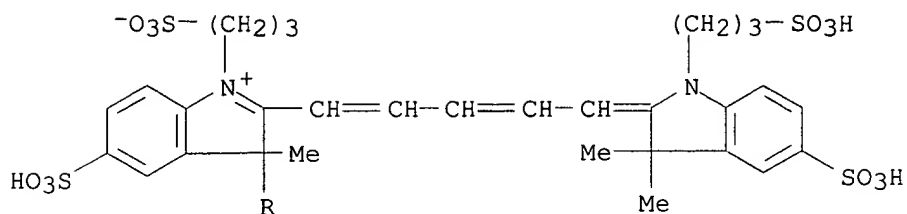
RN 407627-61-6 HCAPLUS

CN 3H-Indolium, 2-[5-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-3-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-3-methyl-5-sulfo-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:3) (9CI) (CA INDEX NAME)

CM 1

CRN 407627-60-5

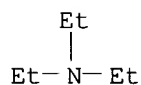
CMF C40 H49 N3 O16 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



IT 407627-59-2P 407627-67-2P 407627-73-0P

407627-84-3P 407627-88-7P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; prodn. of indolium fluorescent **cyanine** dyes and their biol. use)

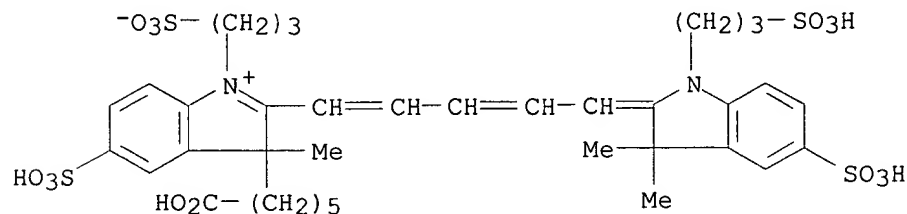
RN 407627-59-2 HCAPLUS

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CM 1

CRN 407627-58-1

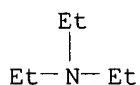
CMF C36 H46 N2 O14 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



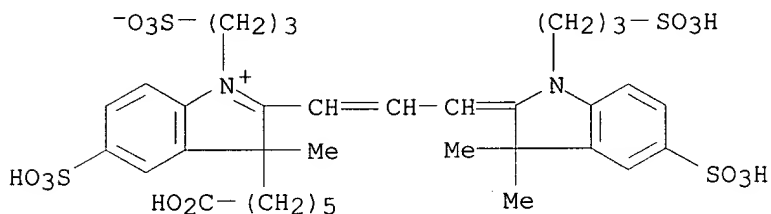
RN 407627-67-2 HCAPLUS

CN 3H-Indolium, 3-(5-carboxypentyl)-2-[3-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1-propenyl]-3-methyl-5-sulfo-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:3) (9CI) (CA INDEX NAME)

CM 1

CRN 407627-66-1

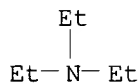
CMF C34 H44 N2 O14 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



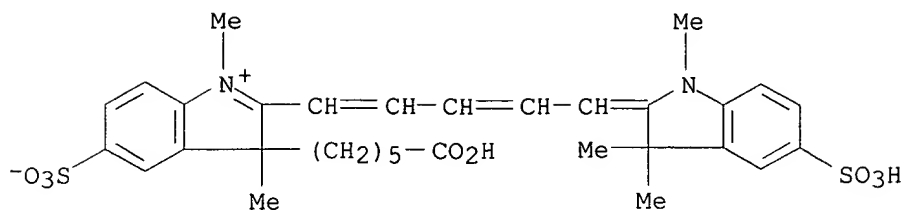
RN 407627-73-0 HCAPLUS

CN 3H-Indolium, 3-(5-carboxypentyl)-2-[5-(1,3-dihydro-1,3,3-trimethyl-5-sulfo-2H-indol-2-ylidene)-1,3-pentadienyl]-1,3-dimethyl-5-sulfo-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 407627-72-9

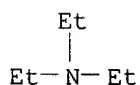
CMF C32 H38 N2 O8 S2



CM 2

CRN 121-44-8

CMF C6 H15 N



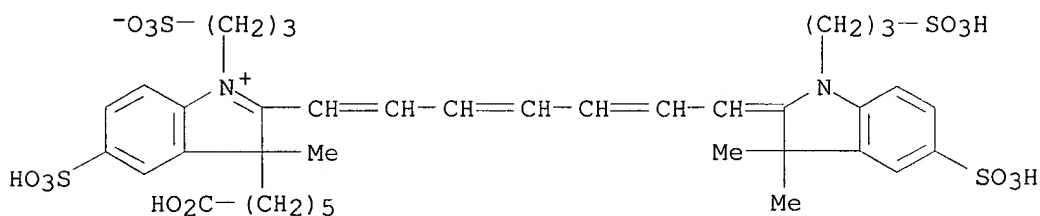
RN 407627-84-3 HCAPLUS

CN 3H-Indolium, 3-(5-carboxypentyl)-2-[7-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-3-methyl-5-sulfo-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:3)
(9CI) (CA INDEX NAME)

CM 1

CRN 407627-83-2

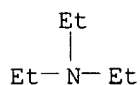
CMF C38 H48 N2 O14 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



RN 407627-88-7 HCAPLUS

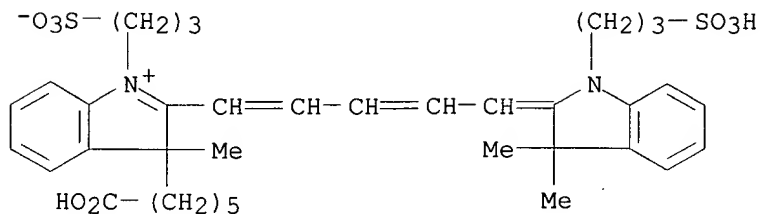
CN 3H-Indolium, 3-(5-carboxypentyl)-2-[5-[1,3-dihydro-3,3-dimethyl-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-3-methyl-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:3)
(9CI) (CA INDEX NAME)

sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI)
(CA INDEX NAME)

CM 1

CRN 407627-87-6

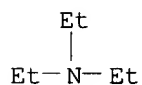
CMF C36 H46 N2 O8 S2



CM 2

CRN 121-44-8

CMF C6 H15 N



IT 407627-65-0P 407627-71-8P 407627-75-2P

407627-77-4P 407627-79-6P 407627-81-0P

407627-92-3P 407627-94-5P 407628-29-9P

RL: IMF (Industrial manufacture); PREP (Preparation)

(prodn. of indolium fluorescent **cyanine** dyes and their biol.
use)

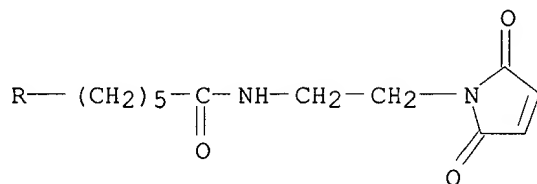
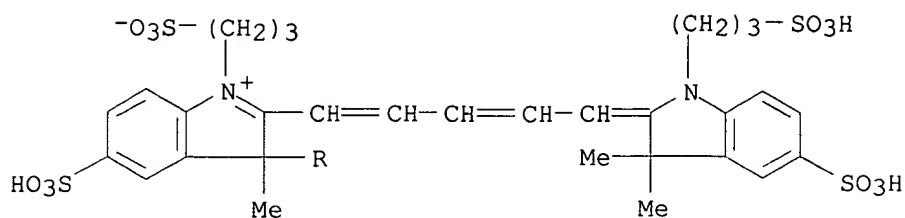
RN 407627-65-0 HCAPLUS

CN 3H-Indolium, 2-[5-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-3-[6-[[2-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)ethyl]amino]-6-oxohexyl]-3-methyl-5-sulfo-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:3) (9CI) (CA INDEX NAME)

CM 1

CRN 407627-64-9

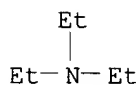
CMF C42 H52 N4 O15 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



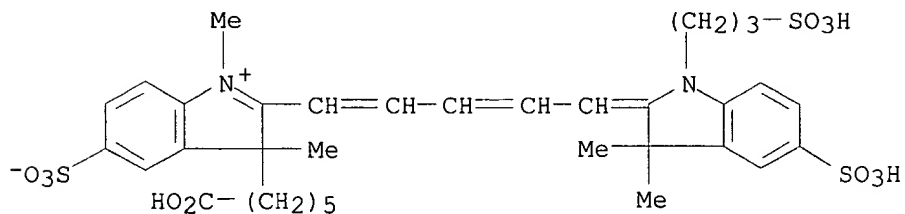
RN 407627-71-8 HCAPLUS

CN 3H-Indolium, 3-(5-carboxypentyl)-2-[5-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-1,3-dimethyl-5-sulfo-, inner salt, compd. with N,N-diethylethanamine (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 407627-70-7

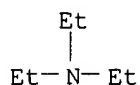
CMF C34 H42 N2 O11 S3



CM 2

CRN 121-44-8

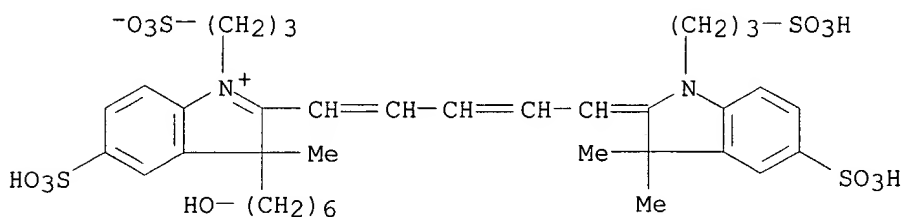
CMF C6 H15 N



RN 407627-75-2 HCAPLUS
 CN 3H-Indolium, 2-[5-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-3-(6-hydroxyhexyl)-3-methyl-5-sulfo-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:3) (9CI)
 (CA INDEX NAME)

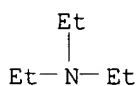
CM 1

CRN 407627-74-1
 CMF C36 H48 N2 O13 S4



CM 2

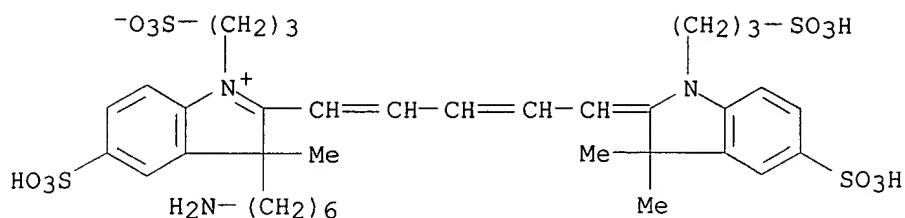
CRN 121-44-8
 CMF C6 H15 N



RN 407627-77-4 HCAPLUS
 CN 3H-Indolium, 3-(6-aminoethyl)-2-[5-[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-3-methyl-5-sulfo-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:3) (9CI)
 (CA INDEX NAME)

CM 1

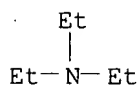
CRN 407627-76-3
 CMF C36 H49 N3 O12 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



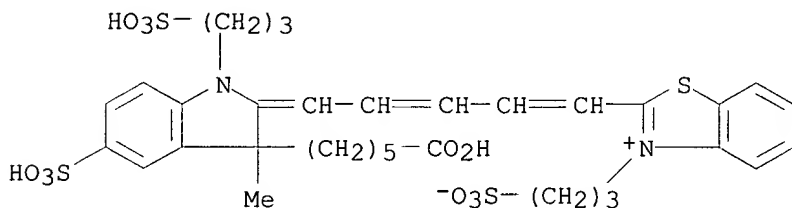
RN 407627-79-6 HCAPLUS

CN Benzothiazolium, 2-[5-[3-(5-carboxypentyl)-1,3-dihydro-3-methyl-5-sulfo-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 407627-78-5

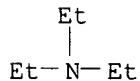
CMF C33 H40 N2 O11 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



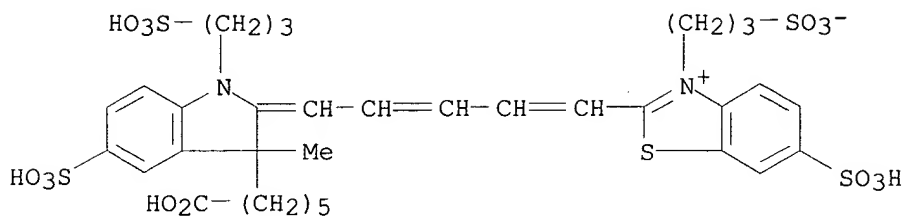
RN 407627-81-0 HCAPLUS

CN Benzothiazolium, 2-[5-[3-(5-carboxypentyl)-1,3-dihydro-3-methyl-5-sulfo-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-6-sulfo-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:3) (9CI) (CA INDEX NAME)

CM 1

CRN 407627-80-9

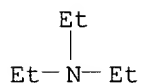
CMF C33 H40 N2 O14 S5



CM 2

CRN 121-44-8

CMF C6 H15 N



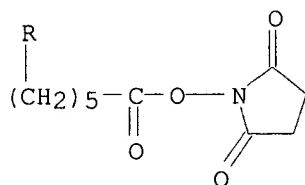
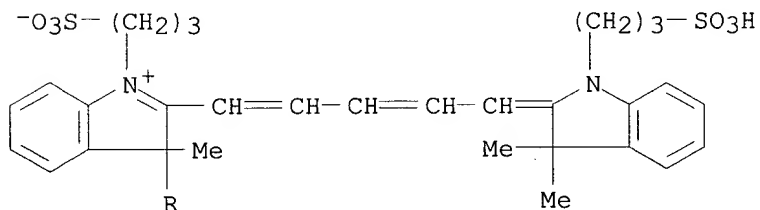
RN 407627-92-3 HCAPLUS

CN 3H-Indolium, 2-[5-[1,3-dihydro-3,3-dimethyl-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-3-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-3-methyl-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 407627-91-2

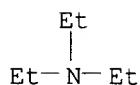
CMF C40 H49 N3 O10 S2



CM 2

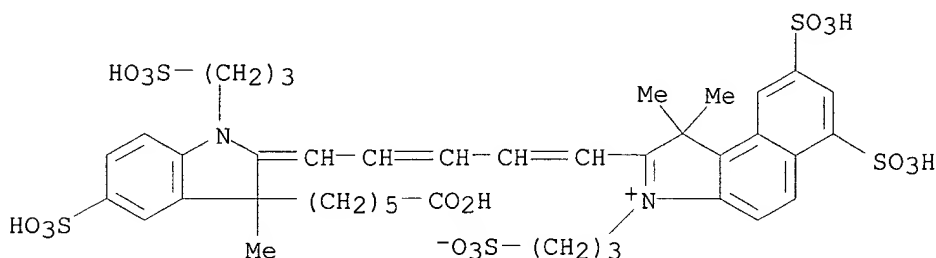
CRN 121-44-8

CMF C6 H15 N



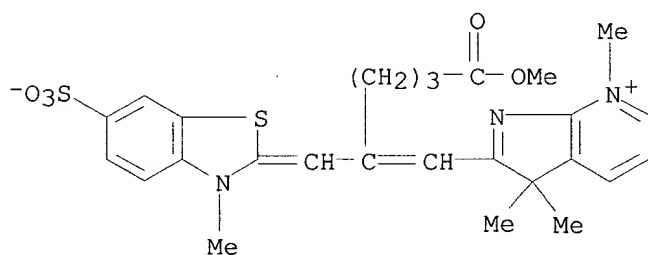
RN 407627-94-5 HCAPLUS

CN 1H-Benz[e]indolium, 2-[5-[3-(5-carboxypentyl)-1,3-dihydro-3-methyl-5-sulfo-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-1,1-dimethyl-6,8-disulfo-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 407628-29-9 HCAPLUS

CN 3H-Pyrrolo[2,3-b]pyridinium, 2-[6-methoxy-2-[(3-methyl-6-sulfo-2(3H)-benzothiazolyldene)methyl]-6-oxo-1-hexenyl]-3,3,7-trimethyl-, inner salt (9CI) (CA INDEX NAME)



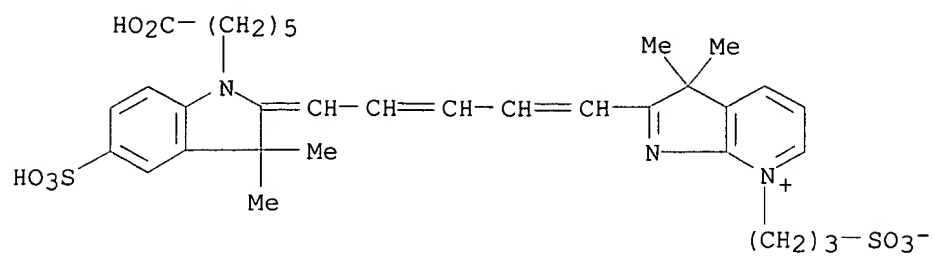
IT 407628-24-4P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(prodn. of indolium fluorescent **cyanine** dyes and their biol. use)

RN 407628-24-4 HCAPLUS

CN 3H-Pyrrolo[2,3-b]pyridinium, 2-[5-[1-(5-carboxypentyl)-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-3,3-dimethyl-7-(3-sulfopropyl)-, inner salt, monopotassium salt (9CI) (CA INDEX NAME)



● K

REFERENCE COUNT:

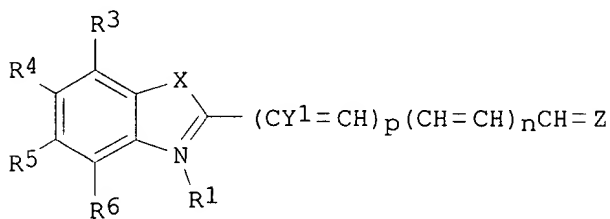
5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 169 2

L69 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2002:136073 HCAPLUS
 DOCUMENT NUMBER: 136:196564
 TITLE: Non-fluorescent asymmetric **cyanine** dye
 compounds useful for quenching reporter dyes
 INVENTOR(S): Lee, Linda G.; Graham, Ronald J.; Mullah, Khairuzzaman
 B.; Haxo, Francis T.
 PATENT ASSIGNEE(S): PE Corporation (NY), USA
 SOURCE: U.S., 62 pp., Cont.-in-part of U.S. 6,080,868.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6348596	B1	20020219	US 1999-357740	19990720
US 6080868	A	20000627	US 1998-12525	19980123
PRIORITY APPLN. INFO.:			US 1998-12525	A2 19980123
OTHER SOURCE(S):	MARPAT 136:196564			

GI

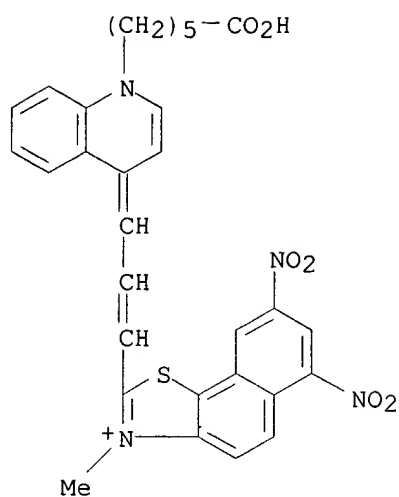


AB The invention provides asym. **cyanine** dye compds. I, including substituted forms thereof, which are non-fluorescent quencher mols. The invention further provides reporter-quencher dye pairs, wherein the asym. **cyanine** dyes are the quenchers, polynucleotides incorporating the asym. **cyanine** dyes, and nucleic acid hybridization detection methods utilizing the dye-labeled polynucleotides. Nitrothiazole blue XXXIV was prepd. from 2-methylbenzothiazole and used as a quencher dye paired with FAM or TET reporter dyes in Taqman assays.

IT **235432-77-6D**, salts or protected compds. **235432-78-7D**, salts or protected compds. **400090-45-1D**, salts or protected compds. **400090-48-4** **400090-51-9**
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (as nonfluorescent asym. **cyanine** dye; non-fluorescent asym. **cyanine** dye compds. useful for quenching reporter dyes)

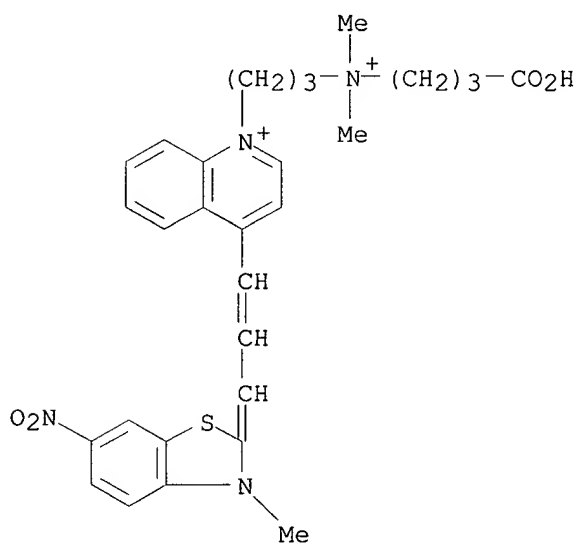
RN **235432-77-6** HCAPLUS

CN Naphtho[2,1-d]thiazolium, 2-[3-[1-(5-carboxypentyl)-4(1H)-quinolinylidene]-1-propenyl]-3-methyl-6,8-dinitro- (9CI) (CA INDEX NAME)



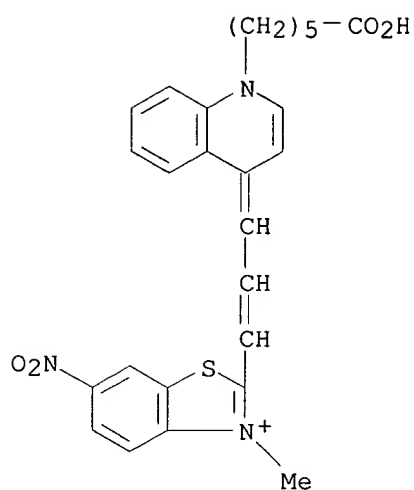
RN 235432-78-7 HCAPLUS

CN Quinolinium, 1-[3-[(3-carboxypropyl)dimethylammonio]propyl]-4-[3-(3-methyl-6-nitro-2(3H)-benzothiazolylidene)-1-propenyl]- (9CI) (CA INDEX NAME)



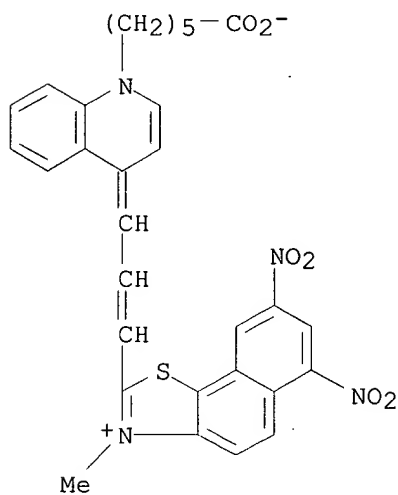
RN 400090-45-1 HCAPLUS

CN Benzothiazolium, 2-[3-[1-(5-carboxypentyl)-4(1H)-quinolinylidene]-1-propenyl]-3-methyl-6-nitro- (9CI) (CA INDEX NAME)



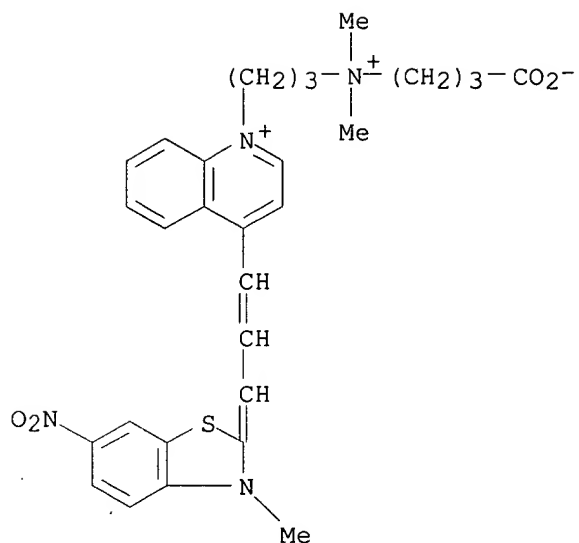
RN 400090-48-4 HCAPLUS

CN Naphtho[2,1-d]thiazolium, 2-[3-[1-(5-carboxypentyl)-4(1H)-quinolinylidene]-1-propenyl]-3-methyl-6,8-dinitro-, inner salt (9CI) (CA INDEX NAME)



RN 400090-51-9 HCAPLUS

CN Quinolinium, 1-[3-[(3-carboxypropyl)dimethylammonio]propyl]-4-[3-(3-methyl-6-nitro-2(3H)-benzothiazolylidene)-1-propenyl]-, mono(inner salt) (9CI) (CA INDEX NAME)



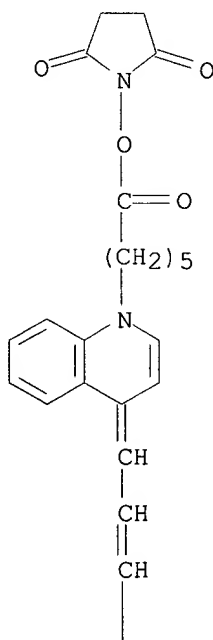
IT 400090-56-4P

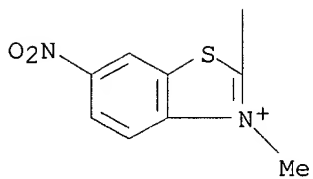
RL: SPN (Synthetic preparation); PREP (Preparation)
(non-fluorescent asym. **cyanine** dye compds. useful for
quenching reporter dyes)

RN 400090-56-4 HCAPLUS

CN Benzothiazolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-
4(1H)-quinolinylidene]-1-propenyl]-3-methyl-6-nitro- (9CI) (CA INDEX
NAME)

PAGE 1-A





REFERENCE COUNT:

84 THERE ARE 84 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 169 3

L69 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:310508 HCAPLUS

DOCUMENT NUMBER: 134:323136

TITLE: **Cyanine** dyes as labeling reagents for detection of biological and other materials by luminescence methods

INVENTOR(S): Waggoner, Alan S.

PATENT ASSIGNEE(S): Carnegie Mellon University, USA

SOURCE: U.S., 20 pp., Cont.-in-part of U.S. 5,627,027.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6225050	B1	20010501	US 1996-745712	19961112
US 5268486	A	19931207	US 1992-884636	19920515
US 5627027	A	19970506	US 1992-831759	19920922
US 5486616	A	19960123	US 1993-158952	19931129
US 5569766	A	19961029	US 1993-158953	19931129
US 5569587	A	19961029	US 1995-424219	19950419
US 6048982	A	20000411	US 1997-873470	19970612
PRIORITY APPLN. INFO.:			US 1986-854347	B1 19860418
			US 1992-831759	A2 19920922
			US 1988-240756	B1 19880902
			US 1992-882802	B1 19920514
			US 1992-884636	A3 19920515
			US 1996-745712	A3 19961112

OTHER SOURCE(S): MARPAT 134:323136

AB **Cyanine** and related dyes, such as **merocyanine**, **styryl** and oxonol dyes, are strongly light-absorbing and highly luminescent. **Cyanine** and related dyes having functional groups to make them reactive with amine, hydroxy and sulfhydryl groups are covalently attached to proteins, nucleic acids, carbohydrates, sugars, cells and combinations thereof, and other biol. and nonbiol. materials, to make these materials fluorescent so that they can be detected. The labeled materials can then be used in assays employing excitation light sources and luminescence detectors. For example, fluorescent **cyanine** and related dyes can be attached to amine, hydroxy or sulfhydryl groups of avidinand to antibodies and to lectins. Thereupon, avidin labeled with **cyanine** type dyes can be used to quantify biotinylated materials and antibodies **conjugated** with **cyanine**-type dyes can be used to detect and measure antigens and haptens. In addn., **cyanine-conjugated** lectins can be used to detect specific carbohydrate groups. Also, **cyanine-conjugated** fragments of DNA or RNA can be used to identify the presence of complementary nucleotide sequences in DNA or RNA.

IT 336850-22-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

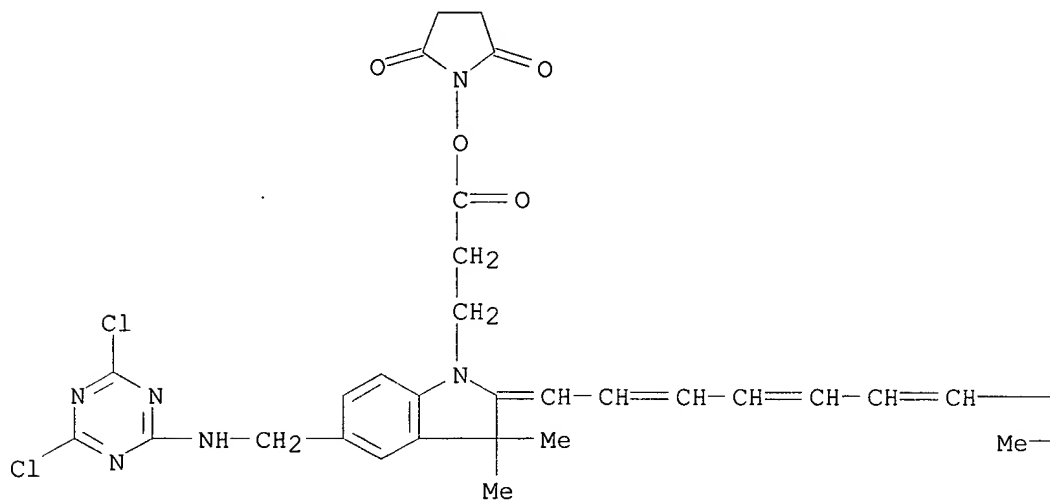
(as reactive dye, antibody labeling with; **cyanine** dyes as labeling reagents for detection of biol. and other materials by luminescence methods)

RN 336850-22-7 HCAPLUS

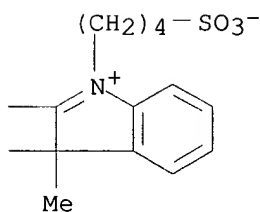
CN 3H-Indolium, 2-[7-[5-[[[4,6-dichloro-1,3,5-triazin-2-yl]amino]methyl]-1-[3-

[(2,5-dioxo-1-pyrrolidinyl)oxy]-3-oxopropyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



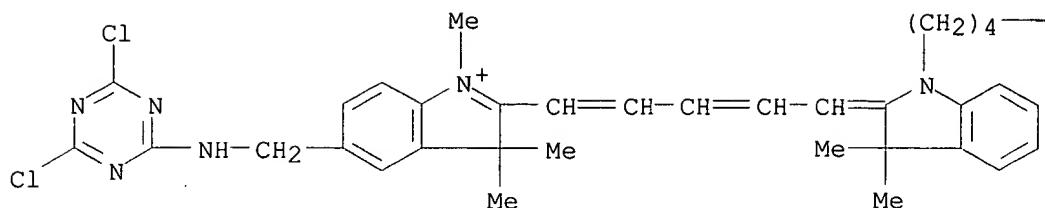
IT 336850-18-1P 336850-20-5P 336850-21-6P

RL: SPN (Synthetic preparation); PREP (Preparation)
(as reactive dye; **cyanine** dyes as labeling reagents for
detection of biol. and other materials by luminescence methods)

RN 336850-18-1 HCAPLUS

CN 3H-Indolium, 5-[[[4,6-dichloro-1,3,5-triazin-2-yl)amino]methyl]-2-[5-[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-1,3,3-trimethyl-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A

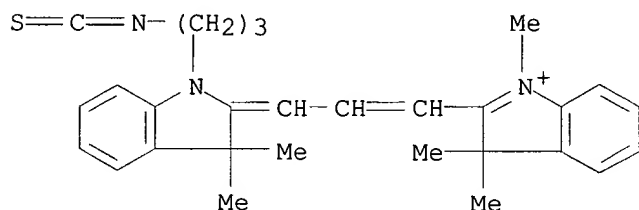


PAGE 1-B

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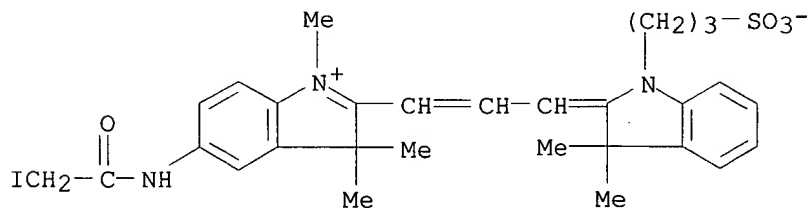
RN 336850-20-5 HCAPLUS

CN 3H-Indolium, 2-[3-[1,3-dihydro-1-(3-isothiocyanatopropyl)-3,3-dimethyl-2H-indol-2-ylidene]-1-propenyl]-1,3,3-trimethyl-, bromide (9CI) (CA INDEX NAME)


● Br⁻

RN 336850-21-6 HCAPLUS

CN 3H-Indolium, 2-[3-[1,3-dihydro-3,3-dimethyl-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1-propenyl]-5-[(iodoacetyl)amino]-1,3,3-trimethyl-, inner salt (9CI) (CA INDEX NAME)

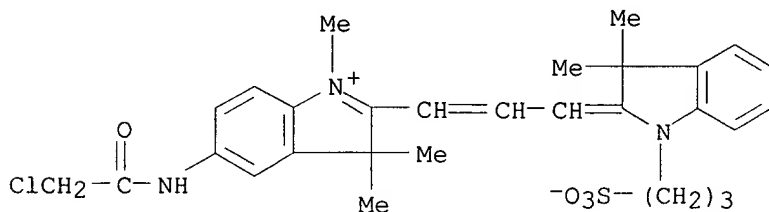

IT 120725-04-4P 336850-24-9P 336850-26-1P
336850-28-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(cyanine dyes as labeling reagents for detection of biol. and other materials by luminescence methods)

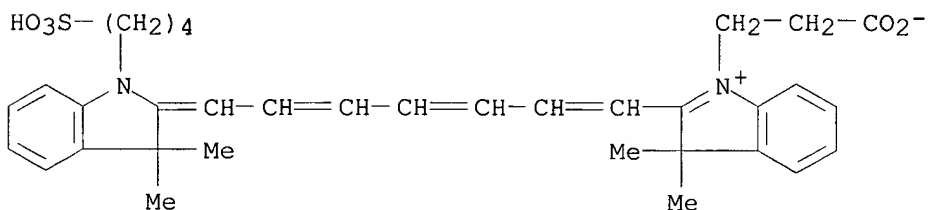
RN 120725-04-4 HCAPLUS

CN 3H-Indolium, 5-[(chloroacetyl)amino]-2-[3-[1,3-dihydro-3,3-dimethyl-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1-propenyl]-1,3,3-trimethyl-, inner salt (9CI) (CA INDEX NAME)



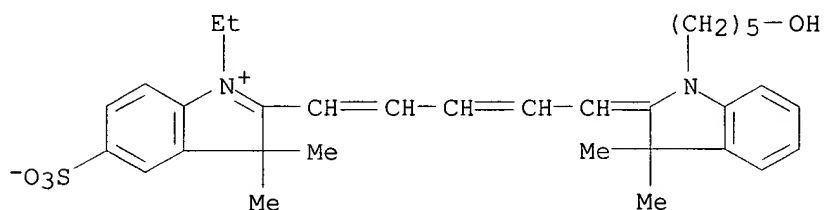
RN 336850-24-9 HCAPLUS

CN 3H-Indolium, 1-(2-carboxyethyl)-2-[7-[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-3,3-dimethyl-, inner salt (9CI) (CA INDEX NAME)



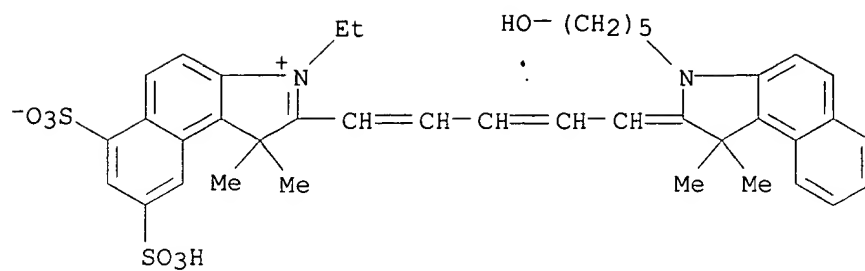
RN 336850-26-1 HCAPLUS

CN 3H-Indolium, 2-[5-[1,3-dihydro-1-(5-hydroxypentyl)-3,3-dimethyl-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



RN 336850-28-3 HCAPLUS

CN 1H-Benz[e]indolium, 2-[5-[1,3-dihydro-3-(5-hydroxypentyl)-1,1-dimethyl-2H-benz[e]indol-2-ylidene]-1,3-pentadienyl]-3-ethyl-1,1-dimethyl-6,8-disulfo-, inner salt, monopotassium salt (9CI) (CA INDEX NAME)



● K

REFERENCE COUNT:

19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 169 4

L69 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:402040 HCAPLUS

DOCUMENT NUMBER: 133:28254

TITLE: Detection of biomaterial using polyamide or
polysulfone membrane support and
fluorescent-labeled binding agent

INVENTOR(S): Dubitsky, Andrew; Decollibus, Damien

PATENT ASSIGNEE(S): Pall Corporation, USA

SOURCE: PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000034522	A2	20000615	WO 1999-US29000	19991206
WO 2000034522	A3	20010607		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD,
MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1998-111915P P 19981211
US 1999-392793 A 19990909
US 1999-163788P P 19991105

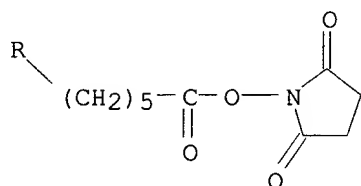
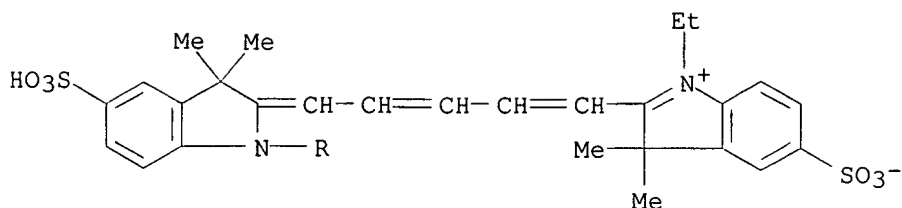
AB A method and system for detecting a labeled complex including biomaterial without stringency washing after complexing and/or without amplifying the label is disclosed. The method uses a polyamide or **polysulfone** membrane support and a fluorescent-labeled binding agent. Reverse dot blot assays for a .beta.-globin sequence and protein dot blots for mouse IgG were performed using various membranes and red fluorescent dye-labeled probes.

IT **146368-14-1D**, Cy5, end-labeled **conjugates** with oligonucleotide probes

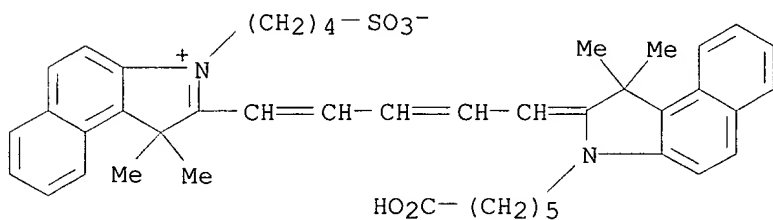
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Cy5; detection of biomaterial using polyamide or **polysulfone** membrane support and fluorescent-labeled binding agent)

RN 146368-14-1 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



IT 251102-88-2D, IRD 700, end-labeled **conjugates** with
oligonucleotide probes
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(detection of biomaterial using polyamide or **polysulfone**
membrane support and fluorescent-labeled binding agent)
RN 251102-88-2 HCAPLUS
CN 1H-Benz[e]indolium, 2-[5-[3-(5-carboxypentyl)-1,3-dihydro-1,1-dimethyl-2H-
benz[e]indol-2-ylidene]-1,3-pentadienyl]-1,1-dimethyl-3-(4-sulfoethyl)-,
inner salt (9CI) (CA INDEX NAME)



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L69 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1999:495475 HCAPLUS
 DOCUMENT NUMBER: 131:141745
 TITLE: Energy transfer dyes as labels in biological systems
 INVENTOR(S): Flick, Parke
 PATENT ASSIGNEE(S): Amersham Pharmacia Biotech, Inc., USA
 SOURCE: PCT Int. Appl., 31 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9939203	A1	19990805	WO 1999-US2105	19990202
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2319490	AA	19990805	CA 1999-2319490	19990202
AU 9925718	A1	19990816	AU 1999-25718	19990202
EP 1053472	A1	20001122	EP 1999-905590	19990202
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002502034	T2	20020122	JP 2000-529606	19990202
PRIORITY APPLN. INFO.:			US 1998-18111	A 19980203
			WO 1999-US2105	W 19990202

OTHER SOURCE(S): MARPAT 131:141745

AB A novel class of energy transfer dyes, their prepn., and their use as labels in biol. systems is disclosed. The dyes are preferably in the form of cassettes which enable their attachment to a variety of biol. materials. The dyes and the reagents that can be made from them offer a wide variety of fluorescent labels with large Stokes' shifts enabling their use in a variety of fluorescence applications over a wide range of the visible spectrum. Prepn. of FAM-Cysteine-linker-ROX energy transfer dye from L-cysteine, 5-iodoacetamidofluorescein, trifluoroacetyl-protected NHS ester of 6-aminocaproic acid and 5'-ROX-NHS ester is described. With excitation at 488 nm, a strong peak was obsd. at 603 nm, characteristic of the ROX emission and indicating excellent energy transfer.

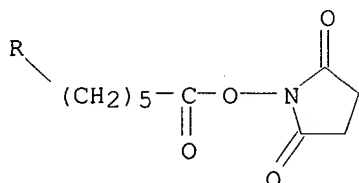
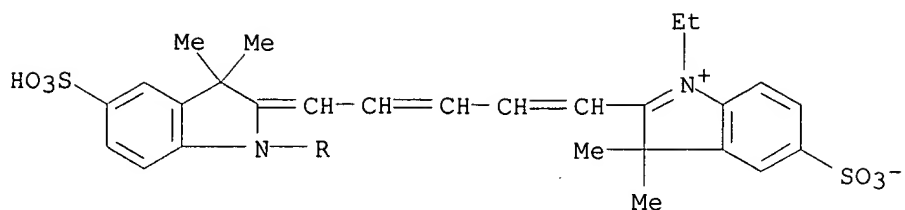
IT 146368-14-1D, Cy5, conjugates 235749-09-4D,

conjugates 235749-10-7D, conjugates

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (energy transfer dye contg.; energy transfer dyes as labels in biol. systems)

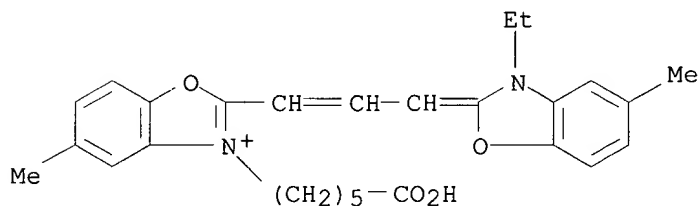
RN 146368-14-1 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



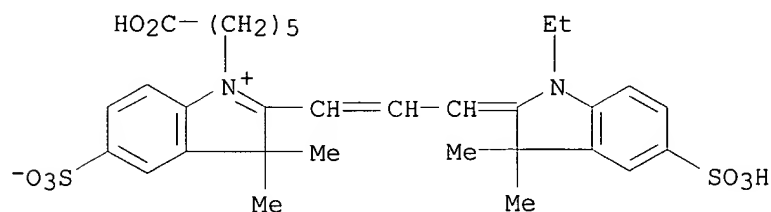
RN 235749-09-4 HCAPLUS

CN Benzoxazolium, 3-(5-carboxypentyl)-2-[3-(3-ethyl-5-methyl-2(3H)-benzoxazolylidene)-1-propenyl]-5-methyl- (9CI) (CA INDEX NAME)



RN 235749-10-7 HCAPLUS

CN 3H-Indolium, 1-(5-carboxypentyl)-2-[3-(1-ethyl-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene)-1-propenyl]-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



REFERENCE COUNT:

8

THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L69 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:708965 HCAPLUS

DOCUMENT NUMBER: 129:335785

TITLE: Acid-labile and enzymically cleavable dye
conjugates for diagnosis with near-IR
radiation and for therapy

INVENTOR(S): Licha, Kai; Riefke, Bjoern; Semmler, Wolfhard;
Wrasidlo, Wolfgang

PATENT ASSIGNEE(S): Institut fuer Diagnostikforschung G.m.b.H. an der
Freien Universitaet Berlin, Germany

SOURCE: PCT Int. Appl., 40 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9847538	A2	19981029	WO 1998-DE1001	19980402
WO 9847538	A3	19990121		
W: AU, CA, CN, HU, JP, KR, NO, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19717904	A1	19981029	DE 1997-19717904	19970423
AU 9879057	A1	19981113	AU 1998-79057	19980402
AU 733757	B2	20010524		
EP 988060	A2	20000329	EP 1998-929212	19980402
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001521530	T2	20011106	JP 1998-544715	19980402
NO 9905181	A	19991022	NO 1999-5181	19991022

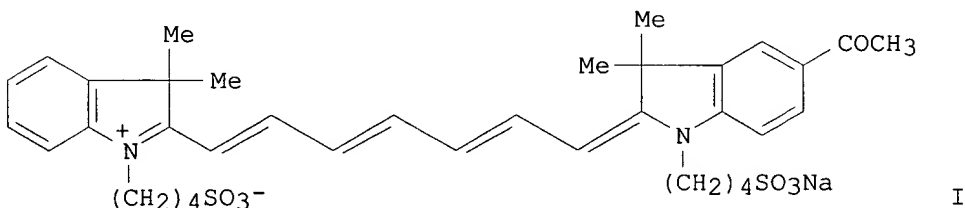
PRIORITY APPLN. INFO.:

DE 1997-19717904 A 19970423

WO 1998-DE1001 W 19980402

OTHER SOURCE(S): MARPAT 129:335785

GI



AB Dyes which fluoresce in the near-IR spectral region are provided, the fluorescence of which is quenched by coupling via a cleavable linker to arom. compds. (e.g. dyes, drugs), antibodies, antibody fragments, or other proteins. Cleavage of such a construct in vivo at a target site (e.g. a tumor or focus of inflammation) leads to an increase in near-IR fluorescence, which can be detected even at deep sites owing to the high transparency of tissues to near-IR radiation. Suitable dyes include tetrapyrrole, tetraazapyrrole, xanthine, phenoxazine, phenothiazine, and

esp. polymethine dyes such as **cyanine** dyes. Drug-dye **conjugates** in which the therapeutic activity of the drug is masked by coupling to the dye may serve as prodrugs which, after administration, are cleaved at a target site to release the active agent, as well as the fluorescent dye which may act as photosensitizer, at the site. The linker may be acid labile, i.e. cleavable at the low pH characteristic of tumors and sites of bacterial inflammation, or cleavable by enzymes which occur in diseased tissues, e.g. bacterial enzymes. Thus, a **cyanine** dye, 5-(1-oxoethyl)-1,1'-(4-sulfobutyl)**indotricarbocyanine** Na salt (I) was prepd. by reaction of 4-hydrazinophenyl Me ketone with 3-methyl-2-butanone followed by 1,4-butanedisulfone to form 5-(1-oxoethyl)-1-(4-sulfobutyl)-2,3,3-trimethyl-3H-indolenine and further reaction of this compd. with glutaraldehyde dianil-HCl. Reaction of I with 4-**carboxyphenylsulfonylhydrazine** followed by N-hydroxysuccinimide and DCCD produced an acid-labile N-hydroxysuccinimidyl ester, which was coupled to anti-melanoma monoclonal antibody 9.2.27; the antibody **conjugate** had a fluorescence quantum yield of 0.1%.

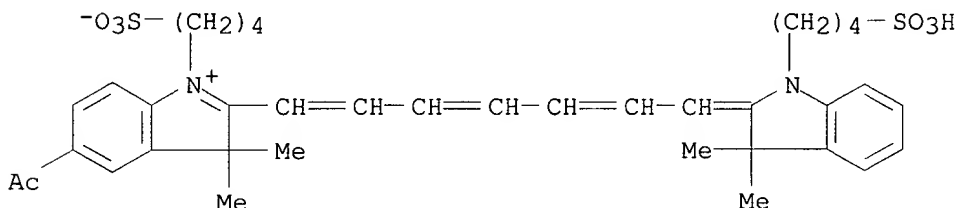
IT 215114-65-1P 215114-69-5P 215114-70-8P
215114-73-1P 215114-74-2P 215114-75-3P
215114-76-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(acid-labile and enzymically cleavable dye **conjugates** for diagnosis with near-IR radiation and for therapy)

RN 215114-65-1 HCAPLUS

CN 3H-Indolium, 5-acetyl-2-[7-[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

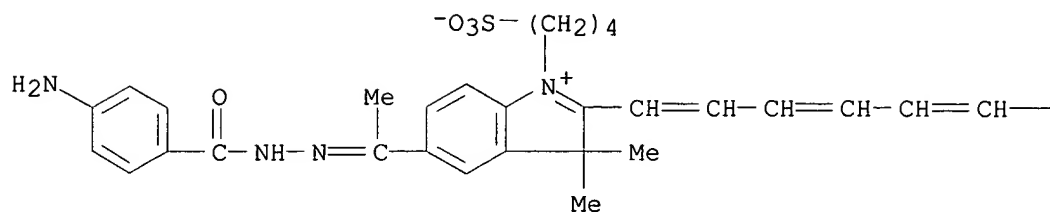


● Na

RN 215114-69-5 HCAPLUS

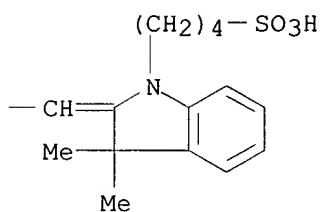
CN 3H-Indolium, 5-[1-[(4-aminobenzoyl)hydrazono]ethyl]-2-[7-[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na

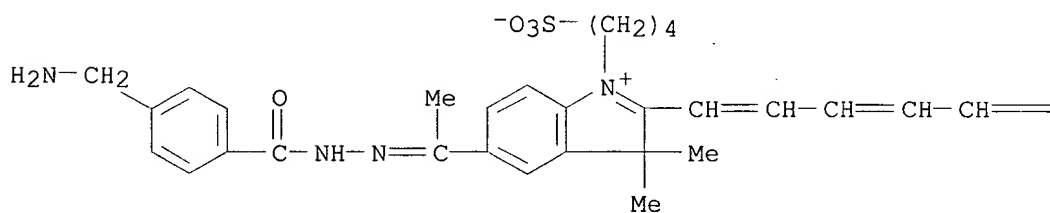
PAGE 1-B



RN 215114-70-8 HCAPLUS

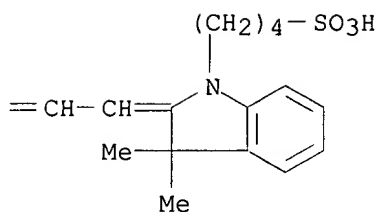
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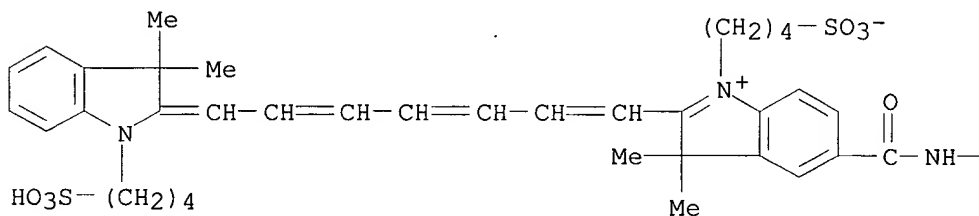
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PAGE 1-B



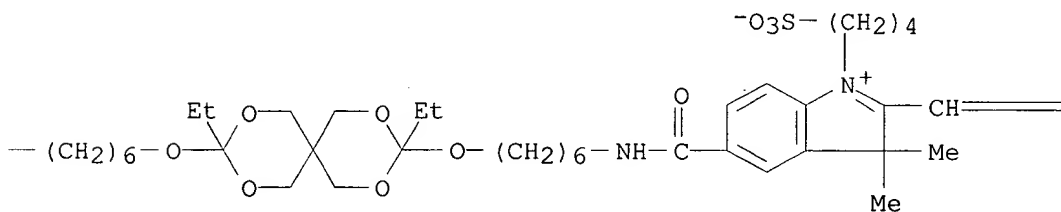
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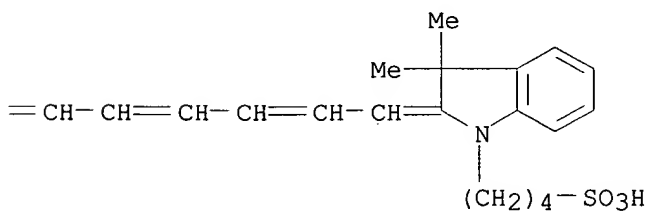


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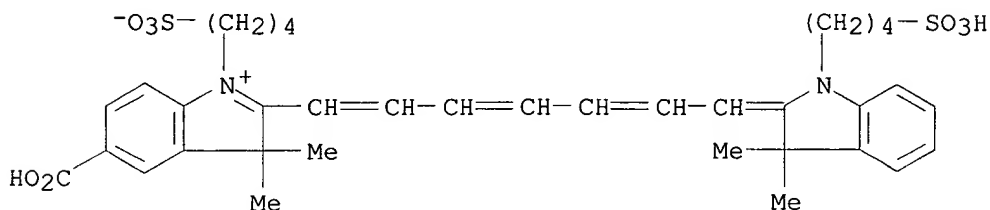
PAGE 1-B



PAGE 1-C



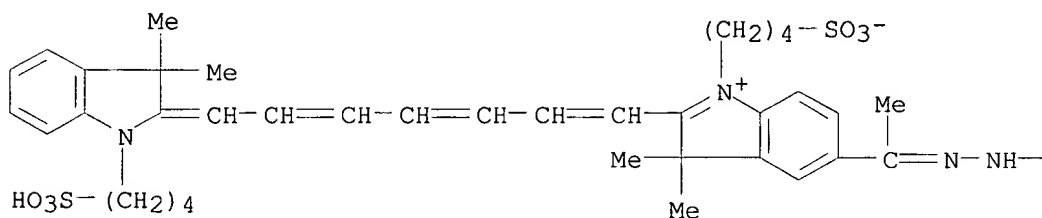
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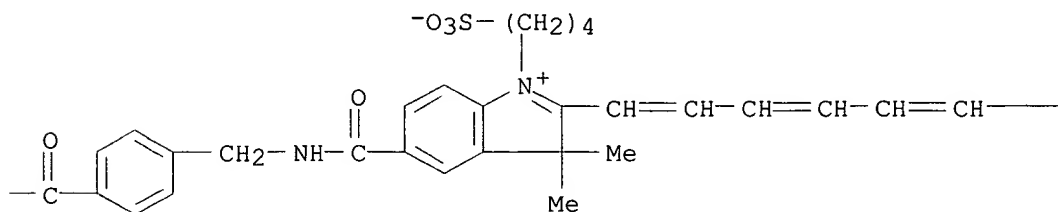
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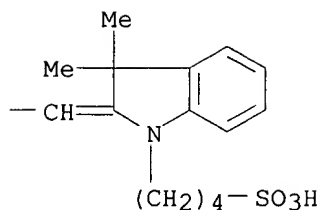


● 2 Na

PAGE 1-B



PAGE 1-C

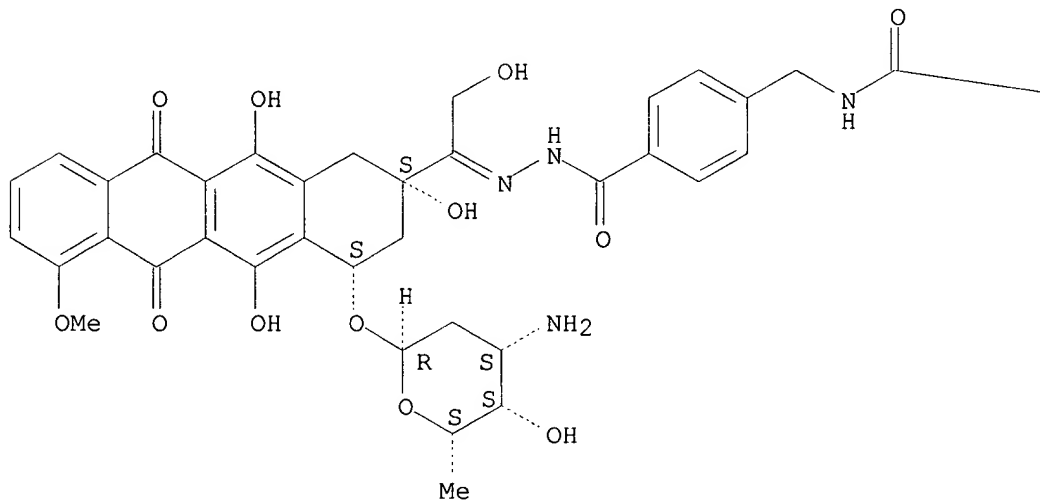


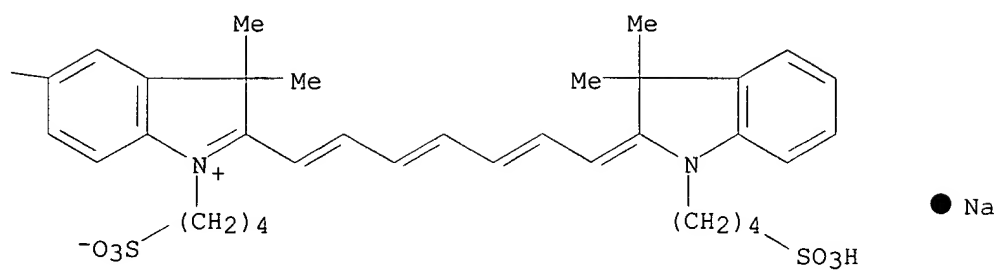
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Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A





=> d ibib abs hitstr 169 7

L69 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1997:85099 HCAPLUS

DOCUMENT NUMBER: 126:86792

TITLE: Fluorescent labeling complexes with large stokes shifts formed by coupling together **cyanine** and other fluorochromes capable of resonance energy transfer

INVENTOR(S): Waggoner, Alan Stewart; Mujumdar, Swati Ratnakar; Mujumdar, Ratnakar Balvant

PATENT ASSIGNEE(S): Carnegie-Mellon University, USA

SOURCE: Eur. Pat. Appl., 29 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 747700	A2	19961211	EP 1996-303879	19960530
EP 747700	A3	19970507		
EP 747700	B1	20011205		
R: AT, BE, CH, DE, ES, FI, FR, GB, IT, LI, NL, SE				
US 6008373	A	19991228	US 1995-476880	19950607
GB 2301833	A1	19961218	GB 1996-11453	19960530
GB 2301833	B2	19970716		
EP 943918	A1	19990922	EP 1999-110086	19960530
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE, FI				
AT 210292	E	20011215	AT 1996-303879	19960530
CA 2178308	AA	19961208	CA 1996-2178308	19960605
JP 09104825	A2	19970422	JP 1996-146333	19960607
JP 2843296	B2	19990106		
US 6130094	A	20001010	US 1998-152009	19980911

PRIORITY APPLN. INFO.:

US 1995-476880 A 19950607

EP 1996-303879 A3 19960530

AB The present invention provides low-mol.-wt. fluorescent labeling complexes with large wavelength shifts between absorption of one dye in the complex and emission from another dye in the complex. These complexes can be used, for example, for multiparameter fluorescence cell anal. using a single excitation wavelength. The low mol. wt. of the complex permits materials labeled with the complex to penetrate cell structures for use as probes. The labeling complexes are synthesized by covalently attaching through linkers to form donor-acceptor complexes. Resonance energy transfer from an excited donor to fluorescent acceptor provides wavelength shifts up to 300 nm. The fluorescent labeling complexes preferably contain reactive groups for the labeling of functional groups on target compds., such as derivatized oxy and deoxy polynucleic acids, antibodies, enzymes, lipids, carbohydrates, proteins, and other materials. The complexes may contain functional groups permitting covalent reaction with materials contg. reactive groups.

IT 185397-56-2DP, reactions products 185397-56-2P

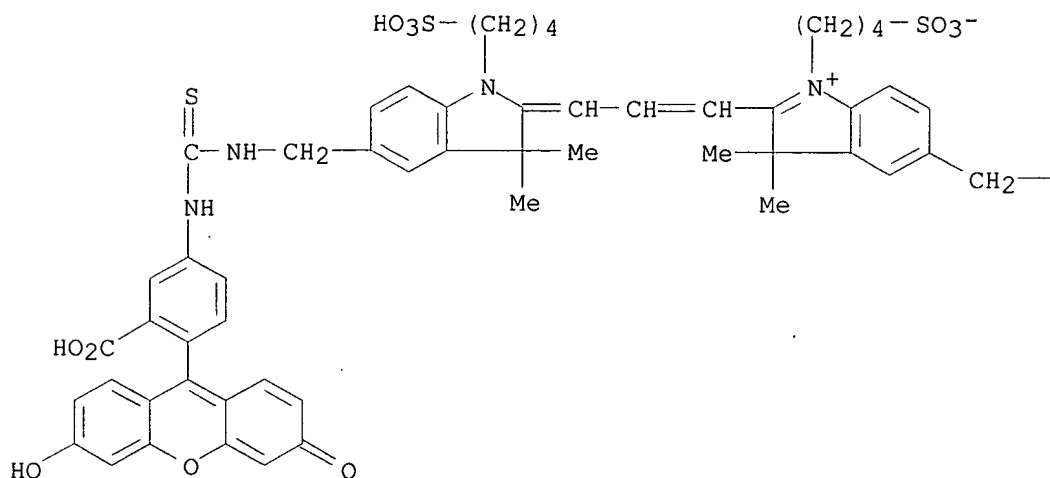
RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses) (fluorescent labeling complexes with large Stokes shifts prepn. for cell anal.)

RN 185397-56-2 HCAPLUS

CN 3H-Indolium, 5-(aminomethyl)-2-[3-[5-[[[[3-carboxy-4-(6-hydroxy-3-oxo-3H-

xanthen-9-yl)phenyl]amino]thioxomethyl]amino]methyl]-1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1-propenyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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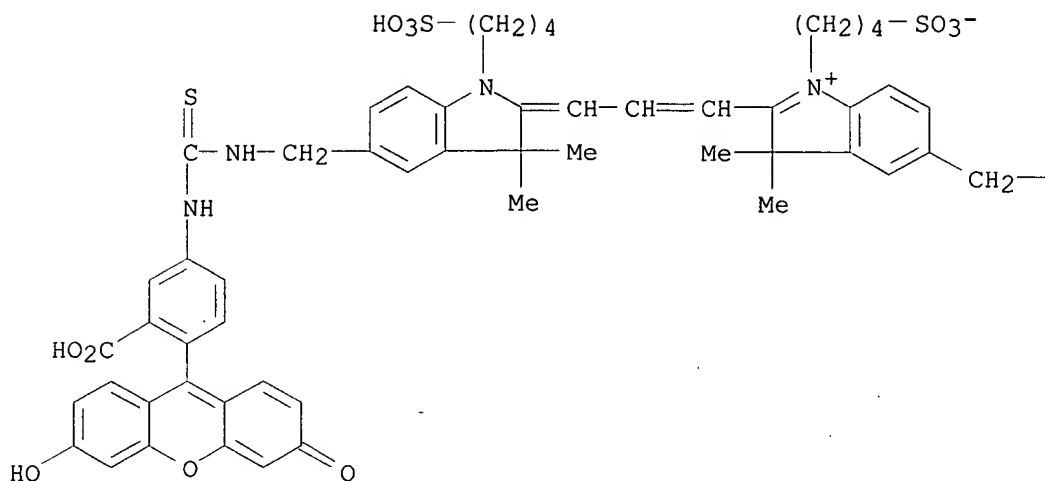


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—NH₂

RN 185397-56-2 HCAPLUS

CN 3H-Indolium, 5-(aminomethyl)-2-[3-[5-[[[[[3-carboxy-4-(6-hydroxy-3-oxo-3H-xanthen-9-yl)phenyl]amino]thioxomethyl]amino]methyl]-1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1-propenyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



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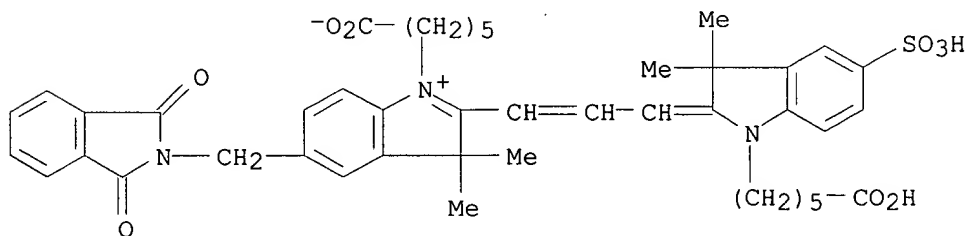
$$-\text{NH}_2$$

IT 185397-43-7P 185397-44-8P 185397-46-0P

RL: ARG (Analytical reagent use); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(fluorescent labeling complexes with large Stokes shifts prepn. for cell anal.)

RN 185397-43-7 HCAPLUS

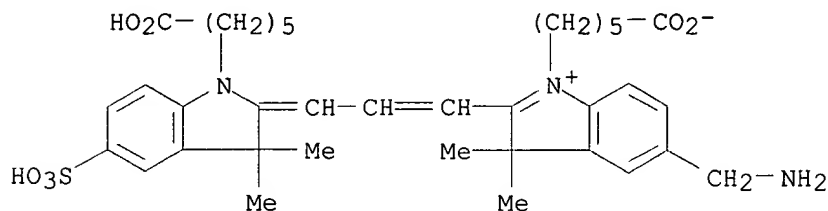
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RN 185397-44-8 HCAPLUS

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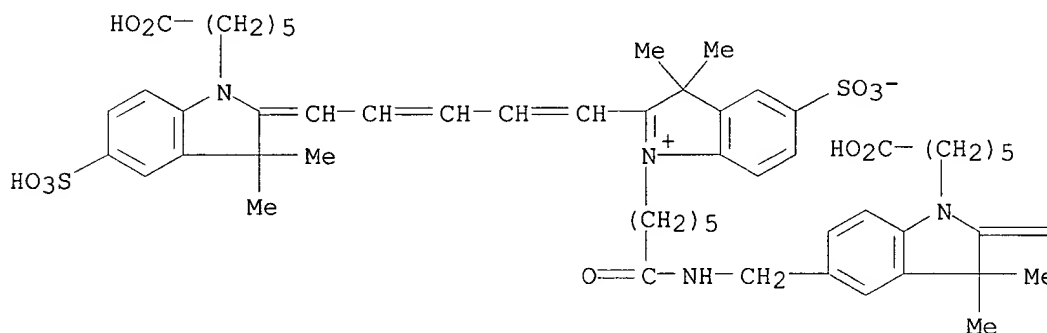
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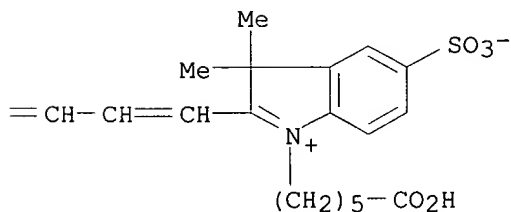
RN 185397-46-0 HCAPLUS

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IT 185397-41-5P 185397-47-1P 185397-48-2P

185397-49-3P 185397-50-6P 185397-51-7P

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)

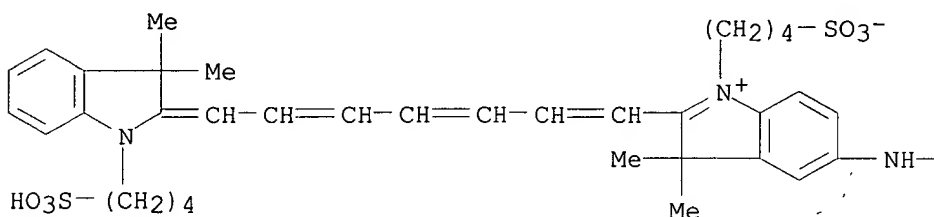
(fluorescent labeling complexes with large Stokes shifts prepn. for

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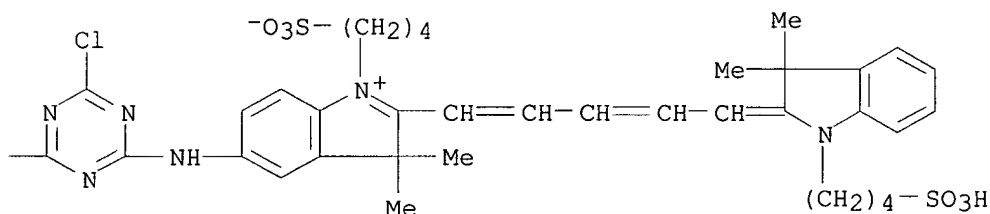
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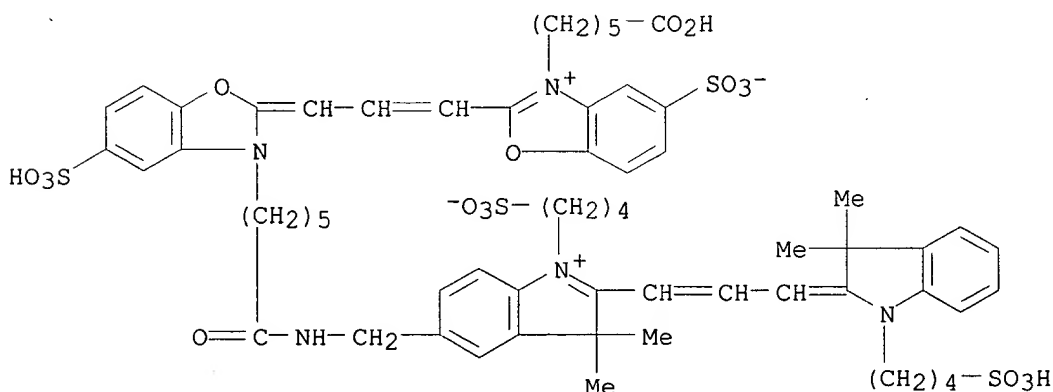


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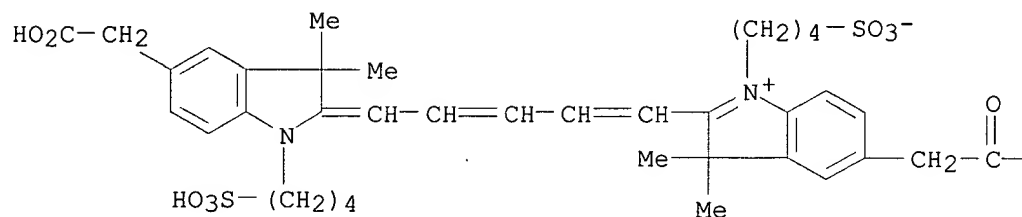


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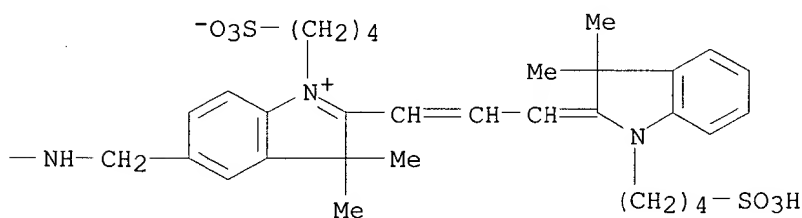
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1-(4-sulfoethyl)-3H-indolium-5-yl]methyl]amino]-2-oxoethyl]-3,3-dimethyl-1-(4-sulfoethyl)-, bis(inner salt) (9CI) (CA INDEX NAME)

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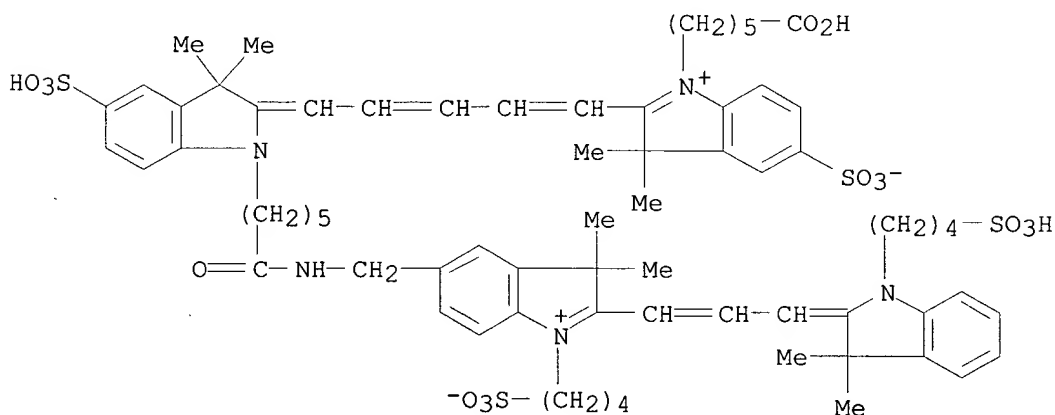


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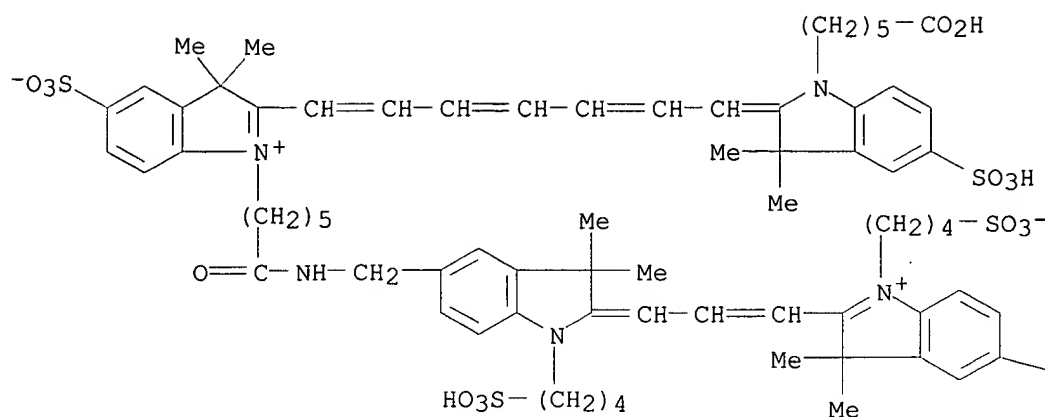
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RN 185397-50-6 HCAPLUS

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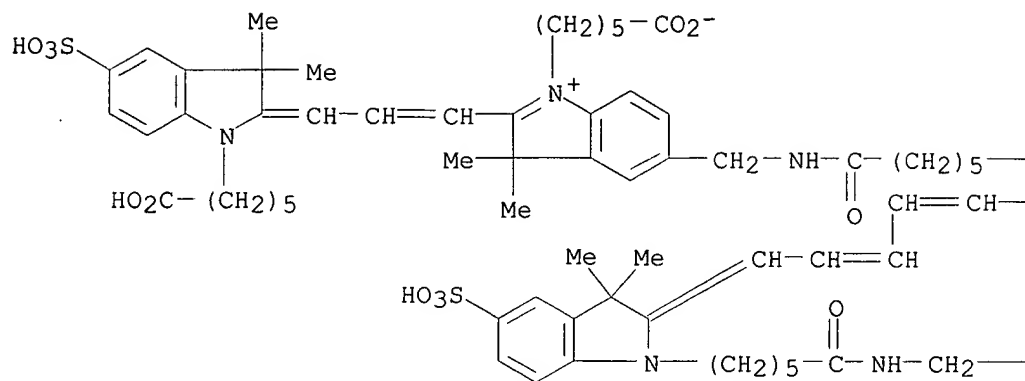
PAGE 1-B

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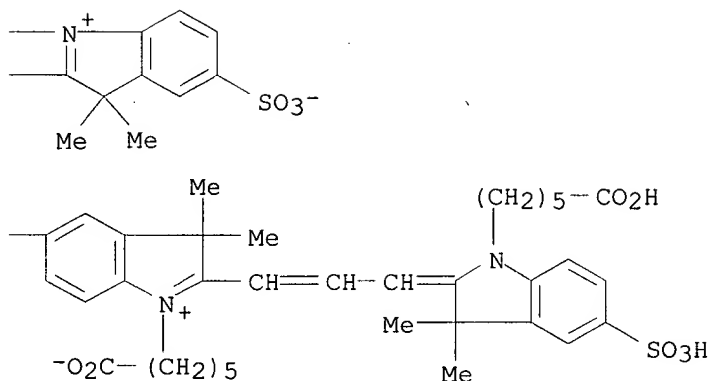
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IT 146368-10-7 146368-12-9 185397-52-8

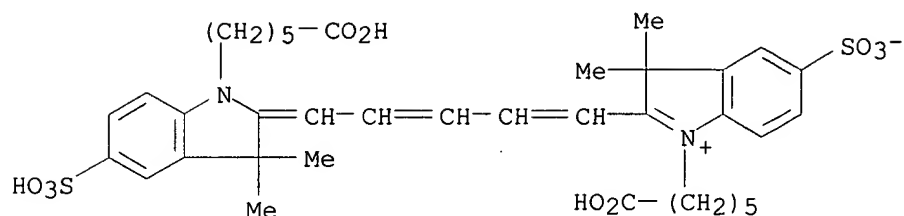
185397-53-9 185397-54-0 185397-55-1

RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)

(fluorescent labeling complexes with large Stokes shifts prepn. for cell anal.)

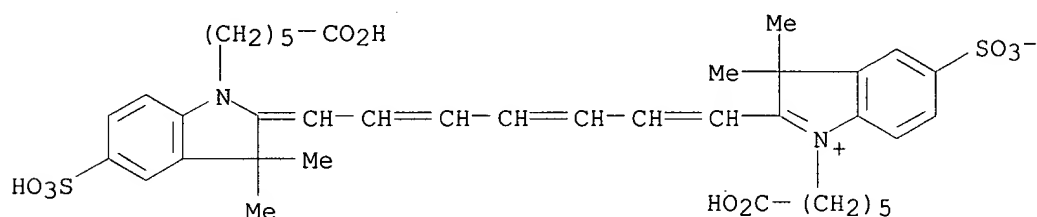
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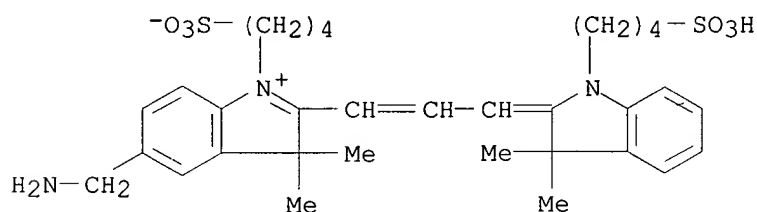
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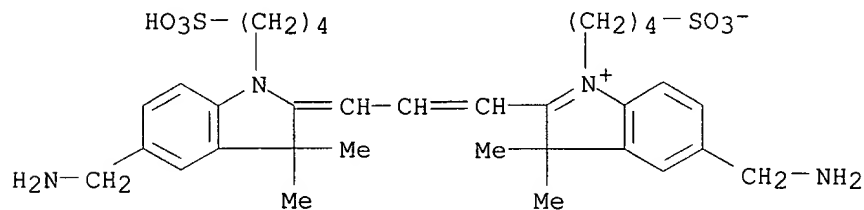
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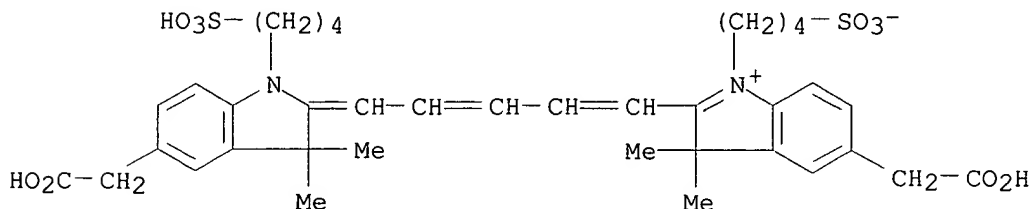
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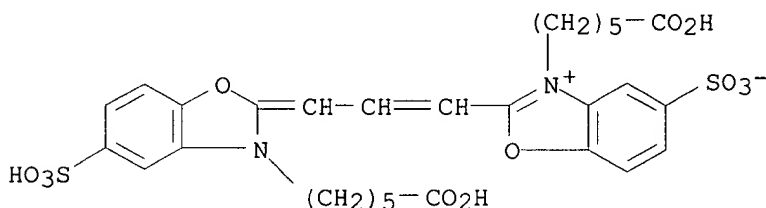
RN 185397-54-0 HCAPLUS

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RN 185397-55-1 HCAPLUS

CN Benzoxazolium, 3-(5-carboxypentyl)-2-[3-[3-(5-carboxypentyl)-5-sulfo-2(3H)-benzoxazolylidene]-1-propenyl]-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



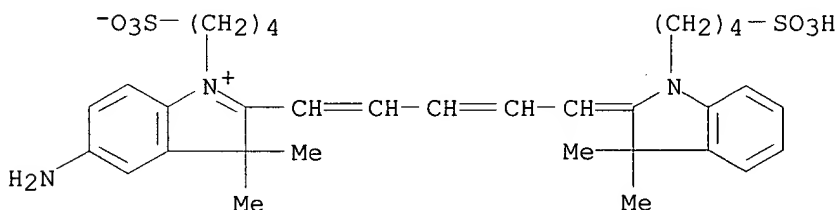
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RL: RCT (Reactant); RACT (Reactant or reagent)

(fluorescent labeling complexes with large Stokes shifts prepn. for cell anal.)

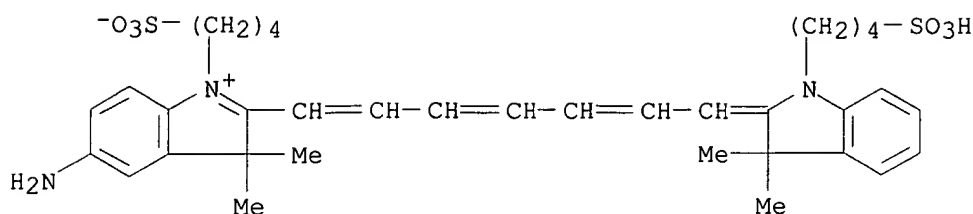
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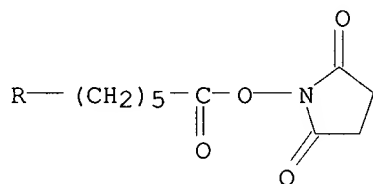
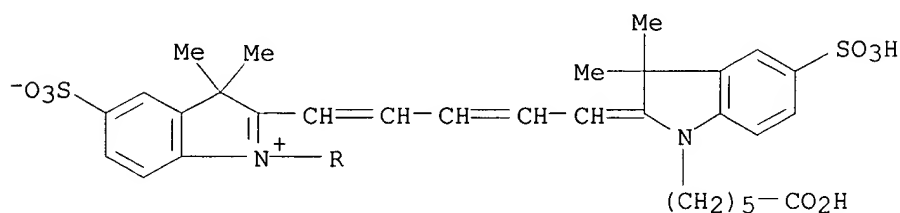
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RN 185397-45-9 HCAPLUS

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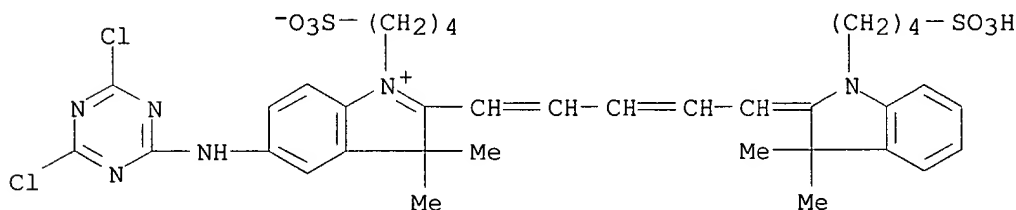


IT 185397-39-1P 185397-46-ODP, succinimidyl ester derivs

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(fluorescent labeling complexes with large Stokes shifts prepn. for cell anal.)

RN 185397-39-1 HCAPLUS

CN 3H-Indolium, 5-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-2-[5-[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3-pentadienyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

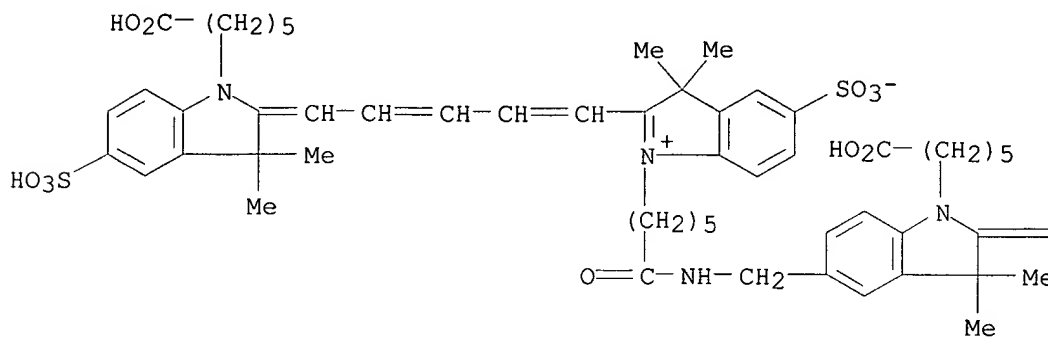


RN 185397-46-0 HCAPLUS

CN 3H-Indolium, 1-(5-carboxypentyl)-2-[3-[1-(5-carboxypentyl)-5-[[[6-[2-[5-[1-(5-carboxypentyl)-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-

pentadienyl]-3,3-dimethyl-5-sulfo-3H-indolio]-1-oxohexyl]amino]methyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1-propenyl]-3,3-dimethyl-5-sulfo-, bis(inner salt) (9CI) (CA INDEX NAME)

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